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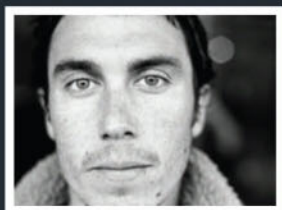
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Chris Burkard MADE *the* SWITCH



THIS WORLD-TRAVELING PHOTOGRAPHER CHOSE SONY BECAUSE HE WAS LOOKING FOR SOMETHING "POCKETABLE BUT POWERFUL."

For nature and travel photographer Chris Burkard, surfing and climbing and kayaking are more than just the subjects he photographs. They're integral to the life he lives.

"I've found that if you're able to live that lifestyle," Burkard says, "rather than just be, like, 'This is what I want to shoot for work, and this is what I want to shoot for myself, and this is what I want to put out in the world...,' well, if you just decide to live it, I think that benefits a lot. If you're not having the experience yourself, then it's not really going to come through in the imagery no matter how hard you try."

As a globetrotter, Burkard learned long ago that he needed a compact, convenient camera—one that literally wouldn't weigh him down. Five years ago he selected a Sony NEX-7 for a trip to remote northern Norway.

"I knew I was going to be traveling to super-remote places on snowmobiles," Burkard says, "and I was going to be bounced around. I couldn't bring a big, heavy DSLR around my neck. I needed to bring something that would be pocketable but powerful. The NEX-7 had just come out, and I had it in to supplement my Nikon. I started using it and was, like, 'Oh, my gosh, this thing is game-changing.'"

He went back and forth between a Nikon system and various Sony mirrorless cameras until the

introduction of the a7 series in 2014, when he made the switch completely.

"The a7S is absolutely my go-to camera for nighttime and high ISO stuff," he says. "In the day it's the a7 II, and soon it will probably be the a7R II. I've always put the emphasis on speed and agility and getting the shot."

"Every single time I pick up my camera," Burkard continues, "the quality just blows my mind. That's been everything to me. I feel like I'm constantly blowing people's minds in terms of, like, 'Oh, yeah, you're shooting this on this tiny little camera.' But I do."

A small camera that produces huge dynamic range allows Burkard to really live the lifestyle he showcases in his work. He wants viewers to feel like the adventures he depicts are attainable, though he still has to work hard to produce them. Take the photograph of a kayaker on Alberta's Lake Maligne, for instance. He had to go the extra mile to get that shot.

"There's really nothing special about it," he says of the stunning image. "It's great light, and it's a great scene, but what makes it unique is the fact that I had to kayak four-and-a-half hours to get there. I wouldn't have gotten that shot if I hadn't brought my Sony. It just wouldn't have been as feasible. To me, that just speaks to the lightness of this system."

FOR MORE ABOUT CHRIS BURKARD, VISIT SONY.COM/ALPHA

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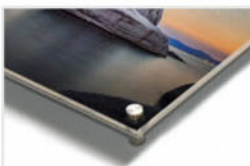
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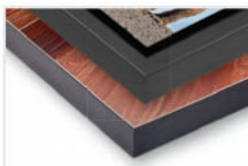
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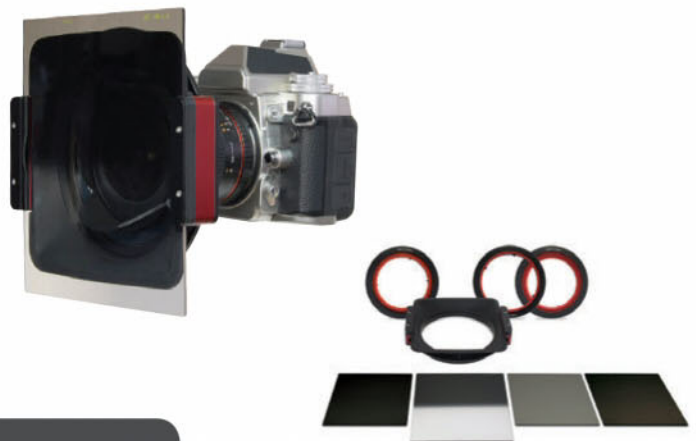
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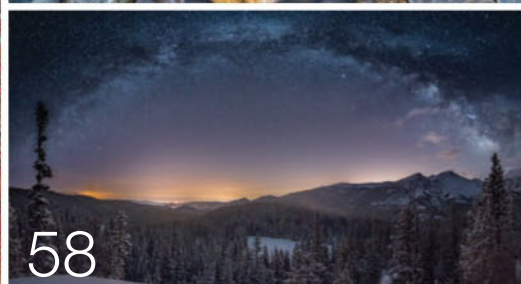
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Photo © 2015 Bill Fortney | FUJIFILM X-T1 Camera and XF60mm F2.4 R Macro lens, at 0.3 sec at F/11, ISO 400.

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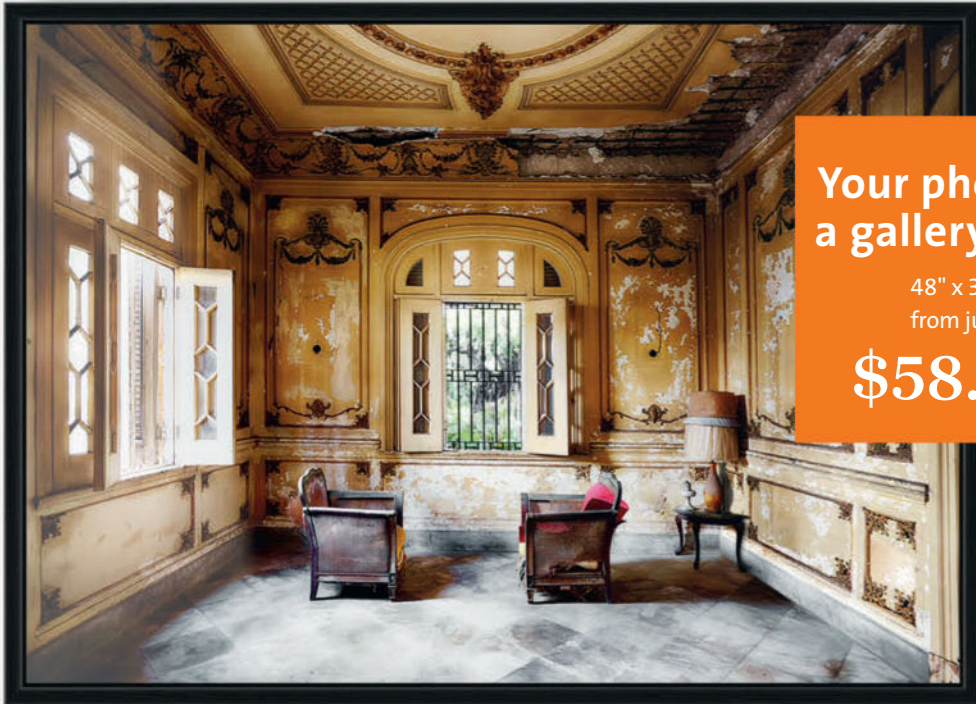
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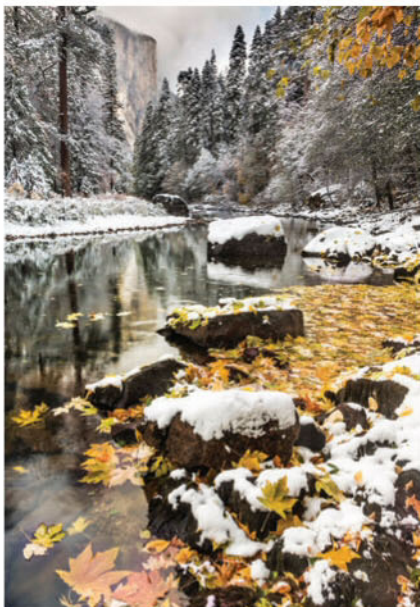
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Photographer: Gary Hart

Location: Yosemite Valley, California

Equipment: Canon EOS 5D Mark III, Canon EF 24-105mm f/4L, Singh-Ray neutral polarizer, Really Right Stuff TVC-24L tripod and BH-55 ballhead

Situation: The secret to photographing fresh snow in Yosemite Valley is arriving before or during a storm, to be there as it clears. Seeing the National Weather Service had forecast early November snow in Yosemite Valley, I rose early, arriving just as the snow started falling. Spending several hours circling the valley gave me a good idea of where I wanted to be for the clearing. I was thrilled that the maple trees near Pohono Bridge and Fern Spring were at their autumn peak, a rare opportunity to capture fall color with fresh snow in Yosemite Valley. With only an hour or two of clearing storm conditions before the relatively warm temperatures stripped the trees of snow, I concentrated my effort on this one view of El Capitan.

No trail, thick brush and slippery rocks make this an awkward location to access even in the best conditions. I gave up trying to stay dry and simply concentrated on avoiding total submersion and broken bones. Using my tripod for balance, I slowly worked my way upstream, searching for the right combination of El Capitan, reflection, rocks and leaves, until the large leaf in the lower left drew me to this spot. The next hour was spent within a 10-foot radius of this leaf, exercising every lens in my bag. When the sun came out, I headed home, wet, cold and immensely satisfied.

—Gary Hart



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“...this time of year offers opportunities for capturing exquisite landscape images for those who are willing to rise early and arrive prepared for uncertain conditions.”

In many parts of North America, the warm colors of fall are beginning to yield to the first snows of the approaching winter season. As illustrated by **Gary Hart**’s beautiful image on this issue’s cover and **Charles Cramer**’s stunning portfolio, “Transitions,” this time of year offers opportunities for capturing exquisite landscape images for those who are willing to rise early and arrive prepared for uncertain conditions.

In other parts of the country, particularly the Southwest, milder conditions and cooler weather make this an ideal time to explore. In “Grand Canyon Hotspots,” **Gary Hart** guides us to the best viewpoints for photographing this natural wonder, from popular locations on the South Rim to less photographed vistas on the North Rim. If you’re planning a trip to the Southwest, it’s also a great time of year to visit locations in Arizona, New Mexico, Colorado and Utah that feature archeological sites of the Ancestral Puebloans. **Larry Lindahl** takes us on an introductory tour of these fascinating historical places, with essential travel information, including special events at Mesa Verde National Park in Colorado this December.

No matter what part of the world you’re in, anytime of year is a good time to explore the intricate details of nature through close-up and macro photography. In his feature, “By Nature’s Design,” **William Neill** remarks on his appreciation for the patterns and textures all around us. “Even when amid the grand landscapes of nearby Yosemite, I often turn my eyes and my camera toward intimate details near at hand.” Neill talks about his approach

to capturing those details and offers key tips for your own close-up photography.

Zooming out from the macro world, wide-angle lenses are among the most popular and essential tools for landscape photography. We consider wide-angle lenses from two perspectives in this issue. In his “Tech Tips” column, **George Lepp** weighs the pros and cons of ultrawide optics, including the distortion inherent in some lens designs, and ways to mitigate light fall-off and chromatic aberration. And if you’re considering adding a new wide-angle zoom to your kit, **Adam Woodworth** reviews the essential techniques for successful wide-angle landscape photography and offers insights that will be helpful when selecting a wide-angle zoom for your system.

No matter your lens, camera or location, capturing unique images takes more than capable gear and a good eye. As **Glenn Randall** explains in “Creative Landscape Photography,” success is as much a product of science—or rather, an understanding of several sciences—as it is a product of artful inspiration, where geography, astronomy, botany, meteorology, psychology and more come into play. Randall details his process for arriving at meaningful images, emphasizing the persistence and discipline that result in great photography.

“It’s important to distinguish a creative image from one that’s merely different,” Randall observes. “Different is easy; creative is hard. An image that’s merely different leaves the viewer puzzled about why you made it. A creative image is one that feels fresh and new, yet oh-so-right.”

—Wes Pitts, Editor

Questions, comments? Email us at editors@outdoorphotographer.com.

SHOW OUTDOOR PHOTOGRAPHY MONTH PHOTO CONTEST WINNERS

CASE

Congratulations to the winners of our Outdoor Photography Month Photo Contest, presented in partnership with CreativeLive. See all of the entries at outdoorphotographer.com.



Landscape Theme Winner—“Last Light” | Photographer: Gerry Groeber | **Nikon D7100, Tamron SP AF10-24mm f/3.5-4.5 Di II Zoom, Manfrotto tripod**
This image was taken in the Superstition Wilderness in Arizona. A winter storm had moved in right before sunset. I had hiked several times to this location looking for evening clouds, with no luck, but on this trip, the late-afternoon storm was perfect.



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Travel Theme Winner—"To The Shoulder Of Buddha" | Photographer: Wasim Muklashy

I was in the hill city of Kandy, widely considered the "Cultural Capital of Sri Lanka." It was on my final night of a three-week trip to the island nation that I had the local driver who was assigned to me take me to the Bahiravokanda Vihara, a towering 85-foot concrete Buddha statue that stands on a hill over the city. A staircase that runs alongside the statue's shoulders leads you to a viewing platform that offers one of the best vantage points to take in the landscape and topography of Kandy. After capturing a few panoramas of the city, I began making my way back down the stairs, where, unexpectedly, a steady trickle of monks began to make their way past me toward the temple just as the glow of twilight was backlighting the face of Buddha. I immediately knew that this, not the sunset, was the moment I was meant to capture. **Samsung NX1, Samsung 18-200mm f/3.5-6.3 ED OIS, f/8 at 1/20 sec., ISO 2500**



Wildlife Theme Winner—"Motion" | Photographer: Douglas Croft

On an early-morning game drive in Kruger National Park with my outfitter, Wild4 Photo Safaris, we saw a coalition of four cheetahs coming toward us across the plain. As they got closer, I realized that I had too much lens, so I pulled my shorter setup out of the seat pouch. This cheetah had fallen behind the others, and when he realized he had been left, he raced to catch up, so I panned along and hit the shutter a couple of times. Things sounded wrong to me, so I checked my settings and found that in pulling the camera out of the seat pouch, I had inadvertently closed my aperture down, slowing my shutter to 1/30. It wasn't until I downloaded everything that evening that I realized the gift I had been given: a nearly perfect slow-shutter pan of a running cheetah! **Nikon D5000, AF-S NIKKOR 70-200mm f/2.8G ED VR II, f/13 at 1/30 sec., ISO 400**

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Holiday Buyer's Guide



◀ HOYA HD3 CIRCULAR POLARIZER

Control reflections and eliminate surface glare with HOYA's HD3 Circular Polarizer. Designed for today's ultrahigh-resolution cameras, it features a new nano-coating that's 200% harder than the previous generation for extreme durability, repelling water and oil, and providing excellent scratch and stain resistance. Estimated Street Price: From \$85. **Contact:** HOYA (Kenko Tokina), kenkotokinausa.com.



EPSON SURECOLOR P600 ▶

Create gallery-quality, wide-format prints from your desktop with the Epson SureColor P600. Capable of producing borderless prints up to 13x19 inches or panoramas over 10 feet long, the P600 employs a new 9-color UltraChrome HD inkset, with three levels of black ink for exceptional color and black-and-white output. List Price: \$799. **Contact:** Epson, epson.com.



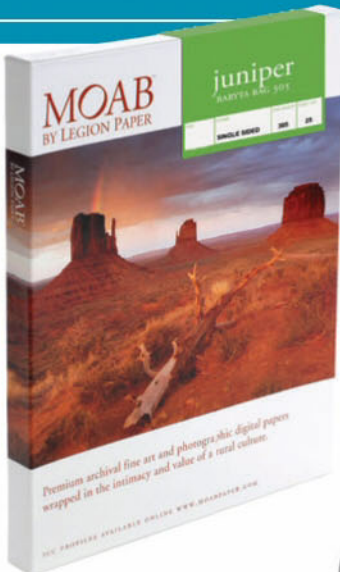
▲ TAMRON 16-300MM F/3.5-6.3 Di II VC PZD MACRO

If you can only carry one lens with your APS-C DSLR, the incredible range and versatility of Tamron's 18.8x 16-300mm ultrazoom can handle practically any photo opportunity from wide to telephoto, plus 1:2.9 magnification close-ups, with a 35mm-equivalent focal range of approximately 24.8mm to 465mm. Available in Canon, Nikon and Sony mounts. Estimated Street Price: \$629. **Contact:** Tamron, tamron-usa.com.



◀ SONY DSC-RX100 IV

The fourth generation of Sony's popular compact camera incorporates a new, 1-inch, 20-megapixel sensor and the same versatile zoom as its predecessor, offering a 35mm-equivalent range of 24-70mm and a fast, variable maximum aperture of f/1.8-2.8. The RX100 IV can capture stills at speeds of up to 16 fps, plus slow-motion and 4K video, too. Estimated Street Price: \$949. **Contact:** store.sony.com.



◀ MOAB JUNIPER BARYTA RAG

Your best works deserve to be printed. Fine-art papers like Juniper Baryta Rag 305 elevate your images to frame-worthy showpieces. Made of 100% cotton fiber, the paper is optimized to retain details in the deepest shadows, with a slightly glossy surface. Available in a variety of cut-sheet and roll sizes. List Price: From \$18.98. **Contact:** Moab by Legion Paper, moabpaper.com.

CANON EF 35MM F/1.4L II USM ▶

An ideal addition to your Canon full-frame system, the new EF 35mm f/1.4L II USM is a fast prime for low-light landscapes and features a minimum focusing distance of just 11 inches for compositions with prominent foreground elements. It also can be used with Canon APS-C DSLRs, providing a 35mm-equivalent focal length of 56mm. Estimated Street Price: \$1,799. **Contact:** Canon, usa.canon.com.



▶ BRUNTON SERVO 120

Keep your camera and laptop charged when away from power with a portable power pack like the Brunton Servo 120. With 120-watt capacity, a built-in inverter and a universal AC outlet, it can provide multiple recharges for your camera or up to two full recharges for your laptop before needing to be recharged itself. List Price: \$399. **Contact:** Brunton, brunton.com.



▶ G-TECH G-DRIVE ev ATC

Perfect for backups in the field, the G-DRIVE ev ATC from G-Technology is a watertight case for G-DRIVE ev and G-DRIVE ev SSD drives that floats in water and can shield your drive from the elements. The G-DRIVE ev ATC can be used as a standalone drive, and is also compatible with the G-DOCK ev two-bay, swappable drive system. List Price: \$49.95 (ev All Terrain Case only); \$179.95 (with 1 TB G-DRIVE). **Contact:** G-Technology, g-technology.com.



▶ LENS PEN DSLR PRO KIT

Keep your lenses clean for spotless images with the LensPen DSLR Pro Kit. Simple and easy to use, LensPen requires no liquids, blowers or lens cloths, using a unique carbon compound to safely remove dust and fingerprints. The DSLR Pro Kit includes the LensPen for DSLR lenses, FilterKlear for lens filters and MicroPro for viewfinders, plus a carrying case. List Price: \$34.95. **Contact:** LensPen, lenspen.com.



◀ BLACKRAPID R-STRAP SPORT

Designed with an under-the-arm tether to keep your camera secure while traversing the landscape, the BlackRapid R-Strap Sport is available in models for both right- and left-handed shooters. The stainless-steel FastenR screws into your camera's tripod mount and attaches securely to the ConnectR locking carabiner on the strap. List Price: \$73.95. **Contact:** BlackRapid, blackrapid.com.

TAMRAC CORONA ▶

The newest photo backpacks from Tamrac feature three access panels, making it easy to organize and get to your gear quickly. The smallest, Corona 14, is designed for mirrorless and compact DSLR systems, while the largest, Corona 26, has room for pro systems with battery grips and multiple lenses. All sizes also accommodate a laptop. List Price: From \$169.95. **Contact:** Tamrac, tamrac.com.



▶ GOAL ZERO SHERPA 100 SOLAR KIT

For extended backcountry photo adventures, the Goal Zero Sherpa 100 Solar Kit will keep all of your devices powered by nature. The kit includes the Sherpa 100 battery to recharge laptops, DSLRs and more, plus the Nomad 20 solar panel, which can fully recharge the Sherpa 100 in 10 to 20 hours, depending on conditions. The Sherpa 100 also can be recharged by AC or using your car's 12-volt adapter. List Price: \$599.95. **Contact:** Goal Zero, goalzero.com.



REALLY RIGHT STUFF ▲ BC-18 POCKET 'POD PACKAGE

Lightweight, compact and easy to take anywhere, the BC-18 Pocket 'Pod Package from Really Right Stuff pairs the TFA-01 tripod with the BC-18 locking ballhead, offering a terrific solution for low-angle shooting and for supporting your camera in situations when a larger tripod isn't practical. The TFA-01 tripod itself weighs just 5.1 ounces, but can support up to 100 pounds. List Price: \$199. **Contact:** Really Right Stuff, reallyrightstuff.com.

SIGMA 24-35MM ▶ F2 DG HSM | A

This fast Sigma 24-35mm wide zoom lens, which features a constant $f/2$ aperture throughout the zoom range, is an excellent choice for both landscape and travel photography. Designed for use with full-frame cameras, it also can be paired with APS-C models, providing a moderately wide to standard focal range. Available in Canon, Nikon and Sigma mounts. List Price: \$999. **Contact:** Sigma, sigmaphoto.com.



▲ SLINGER BIGBAG LIGHTSTAND & TRIPOD BAG

Protect and easily carry larger tripods, lightstands (up to 39") and even umbrellas with the Slinger BigBag Lightstand & Tripod Bag. The inner pouch stores tools and extra quick-release plates. It has a soft outer shell, fully padded inside, weatherproof sealing, plus a shoulder strap. List Price: \$39. **Contact:** Adorama, adorama.com.

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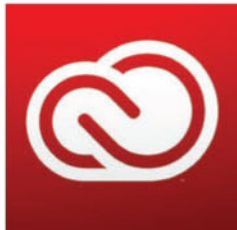


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Contact: Adobe, adobe.com.



▲ NIKON AF-S NIKKOR 200-500MM F/5.6E ED VR

A versatile lens for wildlife, sports and telephoto landscapes, the AF-S NIKKOR 200-500mm f/5.6E ED VR can be used with both FX- and DX-format cameras, providing an equivalent focal range of 300-750mm when used with the latter. Focus as close as 7.2 feet away, with up to 4.5 stops of Vibration Reduction. List Price: \$1,399.95.

Contact: Nikon, nikonusa.com.



▲ KARMA WIFI

With the pocket-sized Karma Go WiFi mobile broadband router, you can create a personal hotspot to connect all of your WiFi devices to 4G LTE mobile data nationwide, with no contracts or monthly fees. Buy data as you go, and use it when you need it. Purchased data never expires, and is currently available in 1 GB (\$14), 5 GB (\$59) and 10 GB (\$99) bundles. List Price: \$149 (Karma Go device). **Contact:** Karma Mobility, yourkarma.com.



◀ COTTON CARRIER ENDEAVOR BELT

Carry your camera with an extra measure of security with Cotton Carrier's Endeavor Belt. The system includes a shoulder strap with an integrated Sliding Safety Tether and a quick-release Camera Hub that anchors your camera to the belt when not in use. There's also an accessory pouch to keep an extra lens, GPS or mobile phone handy. List Price: \$89.

Contact: Cotton Carrier, cottoncarrier.com.



◀ VANGUARD VEO 265AB TRIPOD

Support your system with the lightweight, aluminum VEO 265AB tripod and ballhead kit from Vanguard. Fully collapsed, it's just over 15 inches long, but can extend to a maximum height of 5 feet. It can support up to 17.6 pounds of gear, which will handle a pro DSLR, plus a telephoto lens. The ballhead features an Arca-Swiss-compatible quick-release plate. List Price: \$179.99.

Contact: Vanguard, vanguardworld.us.



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BLACKMAGIC MICRO CINEMA CAMERA ▶

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◀ ROGUE RAY FLASH 2

Transform your DSLR's built-in flash into a ring light, perfect for illuminating macro subjects with the Rogue Ray Flash 2. An adjustable universal mount extends, as needed, to accommodate variations in camera and flash height. Two versions are available for a perfect fit with your camera system. List Price: \$139.95.

Contact: Rogue Photographic Design, rogueflash.com; Expo Imaging, expoimaging.com.



SKB iSERIES DSLR PRO CAMERA CASE II ▶

Transport your essential camera gear with military-spec waterproof protection in the iSeries DSLR Pro Camera Case II from SKB. With custom spaces for your camera body, two lenses, plus hoods and accessories, the case has a gasketed, submersible, impact-resistant design that's ready for just about anything in the wild. Estimated Street Price:

\$119. **Contact:** SKB Cases, skbcases.com.



▼ LEE FILTERS 100MM STARTER KIT FOR DIGITAL

Unlike traditional screw-mount filters, the LEE 100mm system uses a unique holder with two guide rails that allows you to quickly swap any of LEE's filters, which include neutral-density and graduated neutral-density filters, polarizers, warming filters and more. The 100mm Starter Kit For Digital Photography includes the filter holder, a ProGlass 0.6 standard ND, a 0.6 ND Hard Grad, plus a cleaning cloth and carrying pouch. Estimated Street Price:

\$325. **Contact:** LEE Filters, leefilters.com.



▲ SAMYANG 100MM F2.8 ED UMC MACRO

Explore the world of macro details with the Samyang 100mm F2.8 ED UMC MACRO. This manual-focusing lens is a true macro with a magnification ratio of 1:1, and is available in a wide variety of camera mounts. The telephoto focal length allows you to get close perspectives while working at a comfortable distance from your subject, with a broad aperture range from $f/2.8$ to $f/32$ for depth-of-field control. Estimated Street Price: \$549. **Contact:** Samyang, syopt.com.

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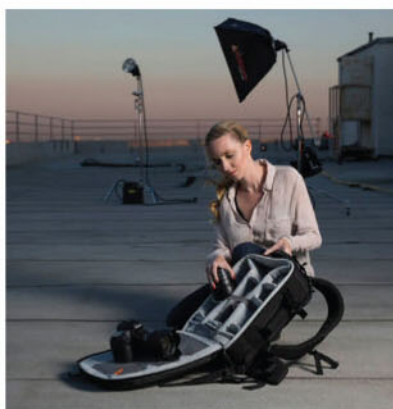
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Holiday Buyer's Guide

ZEISS BATIS 2/25 ▶

Designed for Sony's E-mount cameras like the new full-frame a7R II, the Zeiss Batis 2/25 offers exceptional optical performance and a prime 25mm wide-angle perspective, with a fast $f/2$ aperture. The lens is dustproof and weatherproof, ready for shooting in unpredictable outdoor conditions. An OLED display on the lens—easy to read in low-light conditions—shows focal distance. Estimated Street Price: \$1,299. **Contact:** Zeiss, zeiss.com/camera-lenses.



◀ LOWEPRO PRO RUNNER BP 350 AW II

Carry a complete pro system, including multiple bodies, lenses and accessories, in the Pro Runner BP 350 AW II from Lowepro. With dedicated space for your laptop and tablet, plus a tripod holder and additional room for personal effects and documents, this pack amazingly meets standard airline carry-on requirements. Plus, the entire bag can be protected from the elements with the All Weather AW Cover. List Price: \$249.95. **Contact:** Lowepro, lowepro.com.

SIRUI S-2205-N TRIPOD ▶

Sirui's carbon-fiber S-2205-N tripod is ultralight at just 2.6 pounds, ideal for long treks on foot, but can support over 10 times its weight. Just 17.7 inches in length when fully collapsed, the tripod can extend to a maximum height of 55.5 inches. One leg of the tripod also can convert to a monopod, and an additional, shorter center column is included along with the standard column, allowing you to get down to just 7 inches off the ground. Estimated Street Price: \$399. **Contact:** Argraph, argraph.com.



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Look Sharp!

Maximizing Lens Performance • Extreme Telephotos And Wide-Angles

[By George D. Lepp and Kathryn Vincent Lepp]

We get a lot of questions about lenses. You want to know how to get the most from those expensive tools and how to choose new ones for maximum performance and versatility.

So let's dedicate this column to talking about lenses in the superlative sense: most, best, sharpest, widest and, of course, longest.

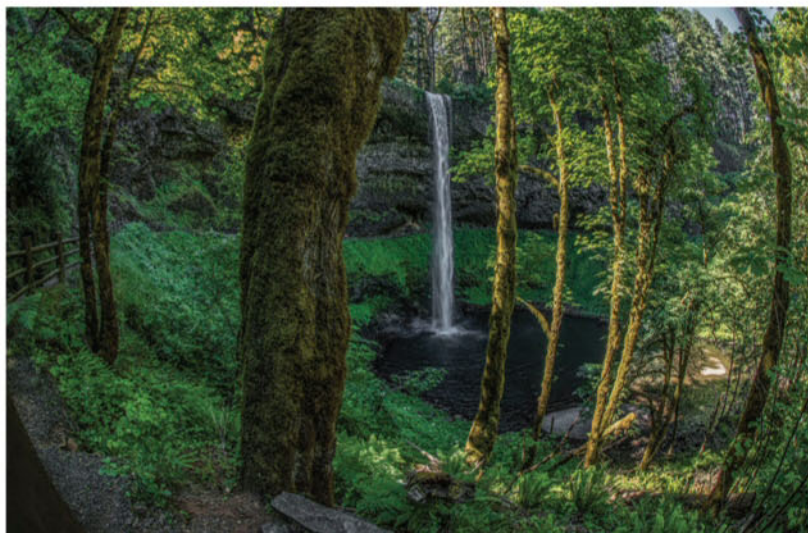
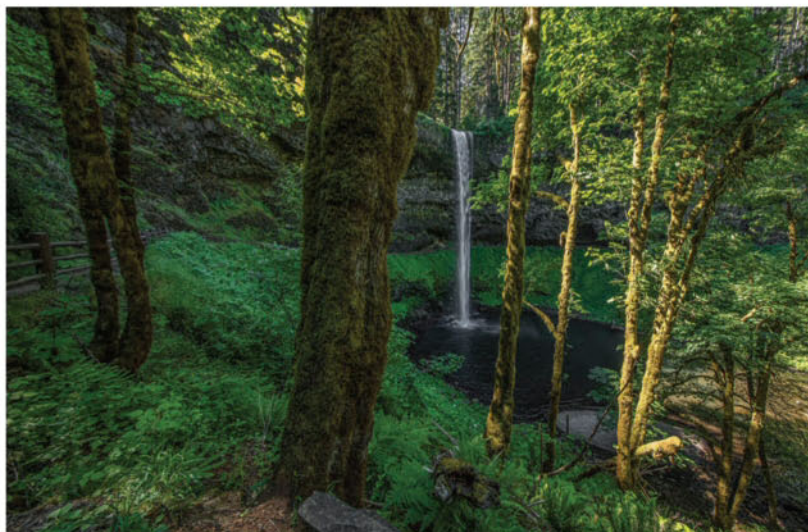
Get The Most From All Your Lenses

Beyond using that tripod I'm always nagging you about, there are a few other basic tasks you need to take care of for best lens performance.

Calibrate the Autofocus. Sharpness depends on the focus being where you expect it to be; but what you see in the viewfinder might not be what's happening at the sensor. When you're following all the rules but still missing the focus, it's time to check the calibration of your camera's autofocus/lens combination. If your DSLR has microfocusing capability, head for michaeltapesdesign.com to check out LensAlign. With your camera/lens mounted on a tripod, photograph the LensAlign targets and calibration charts with autofocus and wide open, then review the resulting capture on the camera's LCD, with a loupe or enlarged on your computer. The chart will tell you if the autofocus is on the money, front-focused or back-focused. Adjust the focus position using the camera's menus, and test again. Once you've found the ideal combination, the camera will remember the adjustment for that lens and correct automatically each time the lens is mounted. I've tested all of my lenses, as well as a number of my colleagues' optics from a variety of manufacturers, and I've been surprised at how many are slightly off; even a minute difference can become critical when using a medium-to-long lens at wide-open apertures.

Use the LCD. The image displayed on the camera's LCD in Live View comes directly from the sensor and shows you exactly what's happening with the focus. For an even bigger view, use a loupe (I use the Hoodman HoodLoupe) and the display magnification feature on your camera. This strategy is especially useful when working on night sky subjects such as the Milky Way and star trails. You want the stars to be pinpoints.

Stop It Down. Sharpness is improved with any lens



TOP: 11mm, 126 Degrees, Rectilinear Lens; ABOVE: 15mm, 180 Degrees, Fisheye Lens. I prefer a rectilinear lens, one that's corrected for both the verticals and horizontal in the frame.

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when it's stopped down a couple of stops. (Caution: If you go too far, you'll lose sharpness due to diffraction.) Use $f/22$ only if depth of field is more important than a tack-sharp image. For maximum sharpness and depth of field, I often employ focus stacking with a sharp aperture such as $f/8$.

Adjust the Diopter. This seems basic, but when did you last check your camera's diopter setting? It needs to be customized to your eyesight, whether you're 20/20 or wear corrective lenses, or don't want to wear your glasses when you're photographing. Loan your camera to another photographer for a few minutes, and it's likely to come back to you with a completely different diopter setting, and then you'll be trying to correct focus that has nothing to do with your camera and lens, but everything to do with looking through a viewfinder that's set for someone else's vision. Use the autofocus to attain correct focus on a subject, and then adjust the diopter setting until the data display in the viewfinder and the image are perfectly sharp.

Get Long!

Let's get on to the good stuff. Need to reach out? Start with a good telephoto and take it to the next level with tele-extend-ers; 1.4X, 1.7X and 2X tele-extend-ers are available from most of the lens manufacturers. I'd advise staying with a matching converter from the company that made the lens. Yes, some image quality is lost with each converter, but with today's quality optics, you can do some amazing things with a teleconverter—or even two teleconverters—and still have very good sharpness. The 2X will lose a little more sharpness than the 1.4X.

Here are the secrets to maintaining image quality at the extreme focal lengths. Start with a good lens and matched converter, use a sturdy tripod, lock up the mirror or, better yet, work from the LCD using Live View and a loupe. If your camera has Silent Live View Mode (as in Canon), use Mode 1. Precise focus is critical because the depth of field will be minimal with telephotos, and if you miss the focus by an inch or two, the resulting image isn't going to look sharp. Fire the camera using an electronic cable or a wireless unit so you don't touch the camera at the moment of release. The very best system I know is the CamRanger, which

(Cont'd on page 82)

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Finding The Spirit Of Place

Learn how to engage with familiar locations in deeper ways

[By Dewitt Jones]



The Grand Canyon has been a favorite subject for Dewitt Jones, who challenges himself photographically by finding new images in well-acquainted places.

When are you going to Antarctica?" a student asks. "Not sure," I reply. Probably never, I muse silently. Never? Whoa, never is a long time, Dewitt! What's happened to your insatiable curiosity, your awe and wonder? Where's your sense of adventure?

Scores of beautiful places grace our planet, and I've been privileged to visit many of them. I've loved seeing and photographing exotic locales and fascinating people. I wouldn't trade my experience with *National Geographic* for anything. Yet, while I still travel quite a bit, lately I'm less and less interested in seeing new

places. Instead, I find myself drawn to return to certain spots again and again. The real adventure seems to be revisiting those places where I know my own spirit resonates with the spirit of place. In truth, I find this more thrilling (and scary) than exploring yet another new locale.

Those of you who read my column regularly know the places I frequent these days. Photographs of Molokai, Hawaii, and the Grand Canyon grace these pages over and over again. Yet, the more time I spend in my favorite haunts, the more I realize I don't know these places at all. On Molokai, I'm still learning about nuances of palms in the Kapuaiwa grove, still plumbing

the daily changes of the Mo'omomi Preserve, still staggered by the relationship of island to surrounding sea.

In the heart of the Canyon, I'm still exploring rock walls, evanescent light and geologic mystery. I want to go more deeply into the spirit of the landscape and to echo that deepening with my photographs. In places I know well, I can hear the earth's heart beating in cadence with my own. In those moments, I'm filled with gratitude for this feeling of connection and come to perhaps connect even more deeply to my self—my true self.

When I photograph from this sense of reverent connection, I seem to have new eyes. My relationship with a familiar old

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friend has deepened to a new level. Last summer in the Grand Canyon, I visited a place I've been to many times before. My eyes beheld a meeting of rock and light and water that I had never encountered before. It's hard to stand in front of that much beauty, hard to breathe when you press the shutter. I have no doubt there are other places this beautiful in the world. My relation with the Canyon is more like a marriage than a fling. We're deeply connected and, every time we're together, I just find more and more reasons to be in love with her.

In my mountain climbing days, there was a group of climbers known as "peak baggers." Peak baggers were driven people, always off to the next summit, to climb it and check it off their list. Always off to the next challenge, nothing new to learn from the peak you had already climbed. I've certainly been a photographic "peak bagger" in the past. How many new places can I photograph? How many can I photograph in a unique way that's only mine? I'm not knocking it. It was an important phase in developing my eye and my creativity.

Now, it seems less important for me to ask, "What's next?" More important to go deeper into my experiences, rather than simply to accumulate more. It's a challenge, photographically, as well as personally. I know I can go to a new place and come back with unique, beautiful images. But can I really continue exploring the places I know well and still find them fresh photographically? As I continue my relationship with the places that speak to my soul, will they still inspire and delight me? Will I be able to translate this intimacy onto images?

You already know from all I've said that I think the answers to all of these questions is "yes." I'll continue to let Molokai and the Grand Canyon mentor me, to teach me new lessons on how to see and appreciate. In the end, perhaps my photography will become simply a ritual of celebration, of reverence, of engaging with the landscape.

I wish that for all of us as photographers, however we choose to get there. **OR**

Dewitt Jones' ebook "*Celebrate What's Right with the World!*" is available on Amazon and the iBookstore, a collection of the best images and words from the Celebrate Facebook page, facebook.com/celebratewhat'sright. Follow Dewitt at facebook.com/dewittjonesfanpage.

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A Photographic Exploration Of Greece

Despite recent headlines, the birthplace of democracy remains a compelling photo destination

[By Elizabeth Carmel]



Sunset over Meteora, Greece.

I enjoy traveling to foreign countries for photography. There's something about traveling with a camera that helps heighten my experience of a place. Being able to photograph a location with "fresh eyes" is a wonderful benefit that awaits us when we visit new countries.

I had the good fortune to visit and photograph in Greece earlier this year, both on the mainland and on the islands. Greece is a treasure trove for photographers and should be on everyone's bucket list, in spite of the country's recent economic struggles. It has so many wonderful, unique landscapes and villages to photograph. I would like to share a few of these special locations to hopefully inspire my fellow photographers to visit and enjoy this amazing country. Don't be frightened away by what you hear in the news—this is a wonderfully hospitable country, is easy to travel in and is very affordable to visit by European standards.

One of the most unique landscapes I found is in a region known as Meteora. This area is a complex of naturally occurring sandstone pillars formed over 60 million years ago. Atop many of the pillars are Greek Orthodox monasteries that are still functioning today. The monks and nuns in some of the monasteries must have their supplies sent over on pulley cables, which span the chasms beneath. This would be a spectacular site for landscape photography even without the beautifully constructed monasteries, but seeing these buildings perched atop the slender rock formations makes it seem otherworldly.

Access to the area is easy since a road rings around the region, providing many opportunities for car pullouts and access to a variety of compositions. If this was in the United States, it would simply be overrun with visitors, and all the photo spots at sunrise and sunset would be crowded. When we visited in early April, there was no one around at sunrise, and at sunset it was still uncrowded. It felt like such a luxury to have photographic "elbow room" to explore such a spectacular location. During our visit, we were also treated to a rare April blizzard, which added to the drama of the location since it's near the high peaks of the Pindos Mountains. My favorite image from this area was taken directly into the evening sun, which created dramatic backlighting on the trees and interesting shadows on the pinnacles.

Another not-to-be-missed photographic spot is the village of Oia on the island of Santorini. This is the most photogenic village I've ever visited, anywhere! The small town is perched on the edge of a vast volcanic caldera that's filled with the blue water of the Aegean Sea. Photographic compositions range from intricate architectural details and street scenes to spectacular sunrise and sunset panoramas. Unlike Meteora, this location is packed at sunset, but the scrum is worth it to get the best shots. An old ruin is perfectly positioned along the top of the caldera to give sweeping views both at sunrise and sunset. My favorite shot was a stitched panorama at sunrise with the first rays of sun just coming over the horizon.

The evening lights of the village at twilight also present a



Morning sun in Santorini.

great photographic opportunity—the whitewashed buildings are beautifully illuminated just after sunset.

Similar to Santorini, the island of Mykonos also has authentic white-washed buildings, narrow alleys and historic windmills to create many photographic opportunities. My favorite shot in Mykonos was unplanned—a pink pelican was wandering down a street near our hotel—that's why I always take my camera, even if I'm just out to get a morning coffee!

Of course, every trip to Greece should include a visit to the historic city of Athens, recognized as the birthplace of Western civilization and democracy. My favorite sunset spot in Athens was a small hill not far from the Acropolis, which provided spectacular views of the Parthenon and the city below. The Parthenon is lit at night and creates a perfect focal point for nighttime compositions. The lights of the city illuminate the clouds at twilight, so the perfect time to photograph is when the lights come on and there's still a sunset glow in the sky.

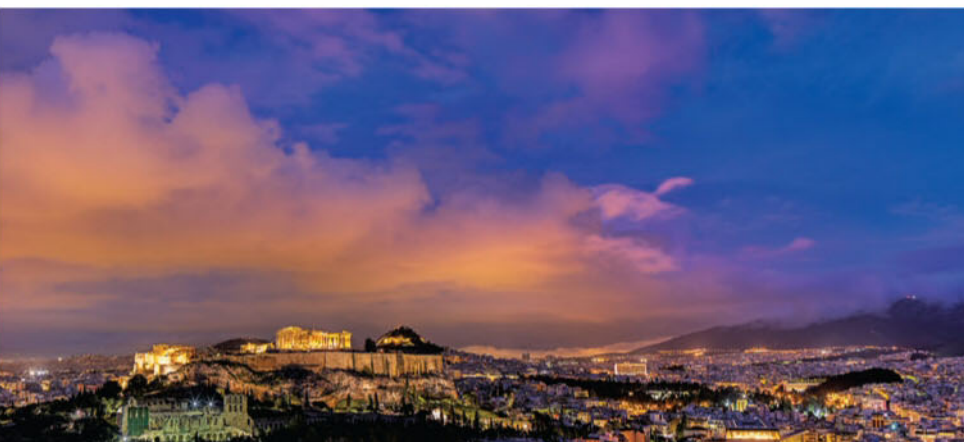
After our visit, I found myself following the drama of Greece's euro crisis and wondering what the future holds for the people of this wonderful country. I hope Americans won't be discouraged from traveling to Greece based on recent news



Pink pelican in Mykonos.

events. Our tourist dollars are needed to help rebuild the economy there, and we all become richer in so many ways by exploring places far from our homeland. Our cameras are the perfect passport to more fulfilling and interesting travels. **OP**

Elizabeth Carmel is a professional landscape and travel photographer. She and her husband Olof Carmel own and operate two art galleries in California, the Carmel Gallery in Calistoga and the Carmel Gallery in Truckee. You can get more information about her prints, galleries, workshops and books at ElizabethCarmel.com and TheCarmelGallery.com. For more information about her videos, go to VistaChannel.tv.



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Text & Photography by Justin Grimm



ENCHANTMENT LAKES

Leavenworth, WASHINGTON

Location

The Enchantment Lakes are located in the upper Cascade Range of Washington State, southwest of the German-themed town of Leavenworth. The area is accessible by two main trailheads just off of Icicle Creek Road. Each route leads to the same fabulous destination; however, the overall distance and elevation gains are much different depending on the path taken. No matter the choice, a climb of no less than 4,400 feet is required to get to just the first of the countless lakes near the top. The area features stunning granite spires, pristine lakes strung together by creeks, never-ending

larch trees and curious mountain goats. There are multiple ways to enjoy the park, but the best way for photographers is to apply for an overnight permit, allowing for multiple attempts to get great photos.

Weather

The Enchantment Lakes are located at an elevation of between 7,000 and 7,800 feet, so weather will change drastically during a long trip. During my five days in the area, I experienced everything from light snow, gale-force winds, calm crisp mornings and blisteringly hot days.

Photo Experience

After quitting my day job in September, I spent my first three weeks of freedom photographing the Canadian Rockies and the northern United States with my good friend. The absolute highlight of the three weeks

was our trip-ending backpacking trek up to the Enchantment Lakes. While the area is accessible to serious day hikers, we were lucky and won overnight permits through the park's lottery system. This meant we had a full five days to explore this spectacular area during the peak of fall color, upping our chances to capture unique photographs. Although I came out with many compelling images from this trip, none compared to this epic morning on our second to last day in the park. Our screams of joy echoed through the valley below as we scrambled to capture this eye-searing sunrise. It was the best combination of light and fall conditions I've witnessed in my life, and I was glad I had the opportunity to capture it in all its glory. Due to the strenuous hike, I recommend minimizing the amount of gear you carry. Although world-class

images can be made using any focal length, I suggest bringing one wide-angle lens and a telephoto. The 14-24mm range is perfect for taking in the grand landscapes here, and a 70-200mm is great for zooming in on the distant layers and side-lit larches. I found myself rarely using the 24-70mm focal length, although everyone's shooting style is different. As with creating all high-quality landscape images, carry and use a sturdy, lightweight tripod.

Best Times

The best time to visit the Enchantment Lakes is no doubt during autumn. Contrary to most pines, the larch tree is deciduous and loses its leaves in autumn. This special attribute makes for truly stunning views of gold and orange surrounding the crystal-clear lakes.

Contact: Washington Trails Association, wta.org/go-hiking/hikes/enchantment-lakes. See more of Justin Grimm's work at 500px.com/JustinGrimm. **OP**



Essential Gear



An ultrawide-angle zoom lens such as the **AF-S NIKKOR 14-24mm f/2.8G ED**

from **Nikon** is a great lens to take in those dramatic landscapes. It also offers protection from the elements, with its magnesium-alloy build with dust- and moisture-resistant sealing and built-in lens hood. The lens provides edge-to-edge sharpness with a constant *f*/2.8 maximum aperture. It also features Nano Crystal and Super Integrated Coating to improve light transmission and reduce the effects of ghosting and flare.

Contact: Nikon, nikonusa.com.

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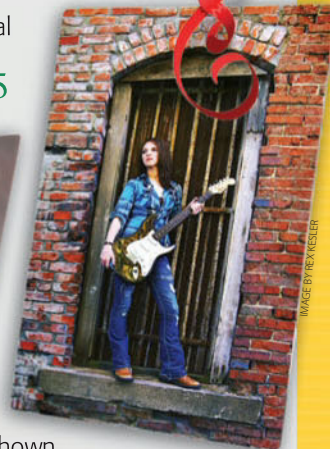
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TRANS



Photographing in late fall can result in unique images that capture the change of seasons

TEXT & PHOTOGRAPHY BY CHARLES CRAMER

I love to photograph in the fall—colorful foliage, beautiful light (with the sun at a lower angle) and usually pleasantly crisp temperatures. What's not to like? When planning a fall trip, it's important to go at the right time. There are various websites that track color changes, and they often supply dates for prime color in previous years. I usually plan on going slightly past the predicted height of color. I don't want to arrive early and find lots of green, and if I'm late for the color—that's fine with me!

ITIONS



If the leaves have already fallen, then that color can sometimes be found on the ground. If this image were made at the height of color (with leaves still on the branches), we wouldn't be able to enjoy the lovely filigree of bare branches in this image of maples in Zion National Park, Utah.



Another advantage of going late in the fall is the possibility of having two distinct seasons in one image. Fall foliage with snow can be wonderful—I joke that I should charge double for these! Here's an image of the Eastern Sierra above Bishop, California, with a dusting of the season's first snow. The snow barely reaches the lower elevation of the aspen—which I like because the whiteness of the snow at the top balances the bright yellows of the aspen.





One fall, I traveled to the San Juan Mountains in Colorado. It's like the aspen have a convention there every fall—with amazing color. This was late September, and the colors were near prime. But my favorite image of the trip happened on the way home driving across Boulder Mountain in Utah. This mountain is also covered with aspen, with color that usually peaks three to four weeks earlier, so almost every tree was now bare. But, I found my foot suddenly applying the brakes as I drove past a small grove in fog! I love fog, as it can give great depth to an image by separating near trees from the background trees. And, to my surprise, there were a few very young aspen that still had a little color. This image is also somewhat monochromatic, which can make the splashes of color seem more dramatic.

Many of my best images were made past prime color. For example, this image was made late one October in Acadia National Park, Maine. I find having just the one isolated group of red leaves much more interesting. This image is almost a black-and-white, except for the red and some subtle green at the bottom. This image also has a “bonus” for those who look very carefully—a few tiny red leaves that have blown off and become stuck in the branches of the trees behind.

In The Camera Bag

Fall weather can be variable and unpredictable, so I carry camera protection. Plastic bags or garbage bags with a hole in one end will do in a pinch. But I like the **Kata Element Covers**; I have the **E-702 PL**, for DSLRs with lenses up to 200mm. This also fits my Phase One 645DF medium-format camera.

An accessory that I'm never without is some type of **viewing card**. Ansel Adams passed these out at his workshops. I find them a huge help in carefully considering compositions. The card helps me decide if the scene I'm contemplating is worth exposing. I try to reduce the editing at home by being choosier in the field. The cards I use range from an 8x10 piece of matboard with a 4x5-inch opening to a more compact and rugged version as seen above. My friend John Sexton came up with the idea of using report cover plastic (from the stationery store). First, use a razor blade to cut out a piece 4x5 inches in size. Then cut a hole of about 2x3 inches—giving standard 35mm proportions of 3:2. As a longtime 4x5 practitioner, I prefer 4:3 proportions, which would be an opening of 2.25 by 3 inches. This viewing card can be carried in a back pocket or used with a lanyard around the neck. The material is almost indestructible.



Avoid Oversaturation

One approach to interpreting fall color would involve having strongly saturated colors throughout the image. This can be pretty impressive—initially. I find many people in my digital printing workshops go overboard with saturation. It almost takes a class “intervention” to convince some that less saturation might be more effective. I compare it to a song on the radio that you hear and immediately love. But, hearing that song repeatedly may cause one to come to despise it. Aggressive images with bold saturation can be seductive. But will they still feel that way after a month? Late season fall images allow for more localized color, and perhaps less tendency to overdo the saturation.

A good snow in Yosemite Valley, California, is an amazing sight, but it's becoming increasingly rare. In 1985, I asked Virginia Adams (Ansel's widow) about the frequency of snowstorms there, and she replied that it snowed much more often in her youth in the 1920s. However, I regularly teach an early November workshop in Yosemite, and have experienced an early snow on several occasions in the last five years. Yosemite is quite a monochromatic palette, especially with snow, so having fall color is a plus! In this image are several of the wonderful black oaks in El Capitan meadow, with Cathedral Rock in the background. There's hardly any color in the scene except for the yellows. I have a Yosemite Valley snow scene made one February, and it looks like a black-and-white print. But, upon closer inspection, very subtle colors can be discerned. I find many like the great subtlety of this print. In my travels in late fall over the years, I've experienced similar early snows at the North Rim of the Grand Canyon, Zion and New England. For a Californian like me, who rarely sees snow, this can be a thrilling experience.



In 2013, I went to New England, even though my schedule prevented me from leaving until October 21—usually way past prime color. I was too late for certain areas, but I still found much to photograph. I do love bare trees, and they were everywhere. This scene in Grafton Notch State Park, Maine, combines many bare trees with patches of strong color. The patches of color can form an intriguing pattern, which wouldn't be the case with color everywhere.



Charles Cramer's prints are available through fine photographic galleries like the Ansel Adams Gallery in Yosemite. He teaches digital imaging for the Ansel Adams Gallery Workshops, John Sexton Workshops and his own program. He has been profiled in many magazines, from Sweden, to the UK, the U.S. and China. He's also included in the books "Landscape: The World's Top Photographers" and "First Light: Five Photographers Explore Yosemite's Wilderness." His work can be seen at charlescramer.com.

By Nature's Design

TEXT & PHOTOGRAPHY BY WILLIAM NEILL

**Discovering details
and patterns through
close-up images**

I love to photograph the patterns of nature. Even when amid the grand landscapes of nearby Yosemite, I often turn my eyes and my camera toward intimate details near at hand.

I bought my first camera in 1974, which thankfully came with a set of extension tubes and a 50mm lens. I was fascinated with the details of nature, and focused more on graphic close-ups rather than the scenic landscape. I also used my 4x5 film camera to isolate nature's details. The ability to tilt and shift the lens is a great advantage in controlling the depth of focus to create sharpness throughout the frame. With the view camera bellows extended to its maximum length, I could focus very closely, but not quite at "macro" lens magnification.

My enthusiasm for macro is still alive and well with my digital cameras. As in those early days, my tools are simple. I use a 50mm macro or a 90mm tilt-shift lens, which offers similar depth-of-field control as my view camera did. One of the key skills any macro photographer needs to learn is how to manage depth of field. These two lenses, plus tubes, offer me flexible options for a range of creative depth of field. Using a wide aperture and high magni-





Cross section, nautilus shell

To highlight the shell's color and shape, I used an off-camera flash to light this shell—two pops from behind the shell and one obliquely across the front edges.



Corn lilies, Summit Meadow, Yosemite National Park, CA

During early summer in Yosemite's high-country meadows, the corn lily plants push up through cold ground and the remaining snow to announce the season. They often grow in dense groupings of plants. I arrived there to find this patch at the optimum timing, when the leaves are just beginning to unfold, but before they grow too high to photograph from straight above. I carefully set up my tripod and aimed my 4x5 camera straight down to frame just this pattern of unfolding leaves. The great amount of depth of field needed required that I use $f/45$ or $f/64$.



Raindrops on bracken fern, Foresta, Yosemite National Park, CA, 1980
After a rainy night, I took an early-morning walk in the forest. A beam of light backlit the fronds, while the background area was still in deep shadow. The bright sunlight silhouetted the waterdrops, stems and veins in the plant, etching a strong graphic pattern for this image.

fication can give a beautiful soft-focus effect, especially by simplifying the background. Most often in my close-up photographs, I'll want total sharpness to reveal the full depth of detail in the subject, such as with an array of tree branches or ice crystal designs on the edge of a pond. The design becomes stronger when all is sharp with no out-of-focus area.

Besides the obvious need for great light and composition, camera position is especially important with macro imagery. The angle at which one is photographing a subject can determine the degree of sharpness. For example, if

you're aiming obliquely at an interesting ice pattern from eye level, even a small aperture may not pull the whole pattern into sharpness if the focus range is beyond the focal length/aperture combination. The more parallel the camera back is to the main plane of the subject, the better.

When using the wide-aperture, soft-focus effect, your camera angle is just as important. Besides focusing on the main object, such as a flower, it's vital to look for potential distractions around it. Bright areas in front of or behind the flower can draw the viewer's eye away from what you're trying to show them.

Painted bark eucalyptus, along the Hana Coast, Island of Maui, HI, 1994

The vertical panoramic format of this image helps convey the tall and narrow trunk of this eucalyptus tree, and emphasizes the bark's fascinating patterns and colors. The day was sunny, but I searched for my composition on the shaded sides of the grove of trees, which gives the resulting image rich detail and saturated color. The rising front standard of my view camera allowed me to control perspective as I focused on a part of the tree high above my head.

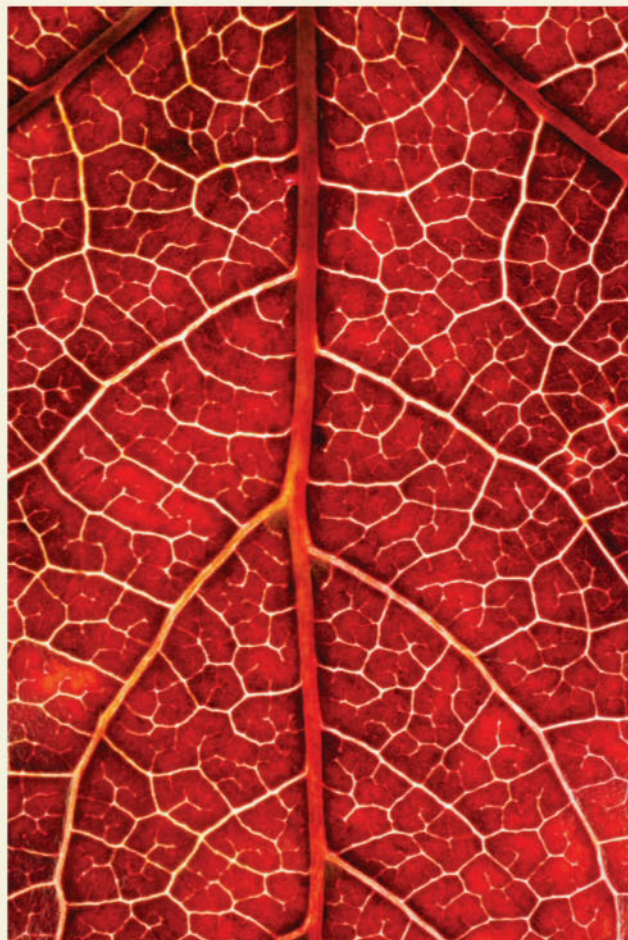


Plum blossoms, Ahwahnee, CA, 2013

This plum tree grows in front of my living room windows. When it begins to bloom, I watch it daily, especially when the sun begins to set behind a nearby ridge. In this image, the sun is partially blocked by trees and thrown out of focus by using the lens' widest aperture. This creates the soft effect of a shallow depth of field and the circular spectral highlight of the out-of-focus sun.

Sweet gum leaf detail

I found this leaf in my neighborhood and brought it home to photograph. In order to reach this magnification, I added two extension tubes to my macro lens. I also wanted to use strong backlight, so I used a McClamp (fmphotography.us) to hold the leaf where the late-afternoon sun would light up the patterns of veins. Working in the controlled conditions of my studio, I lined up my camera's sensor to be parallel to the plane of the leaf.



Key Tips For Close-Up Compositions

- Use a tripod with no center column for lower camera placement.
- Align your film or sensor plane as parallel to the subject's plane as possible when maximum sharpness is desired.
- Eliminate distracting foreground and background elements.
- Bracket apertures to experiment with the balance of sharp and soft focus.
- Fill the frame with strong graphic shapes.



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Salsify Seeds II

These seeds are a favorite macro subject that I can find around my home. For this image, I waited until sunset for the soft and warm light in the background. I adjusted my focus to emphasize the seeds' centers and the lines of the top seed heads.

By Nature's Design

My pattern images were used to illustrate *By Nature's Design*, a book in which I collaborated with the Exploratorium Museum of San Francisco. Underlying the many modifications and adaptations of patterns that occur in nature is a hidden unity. Nature invariably seeks to accomplish the most with the least—the tightest fit, the shortest path, the least energy expended. If you're interested in learning more about the science behind nature's form and function, the book is still available on Amazon.com.

Whether handholding my camera or using a tripod, I maneuver around the object while watching carefully to see how the graphic elements fill the frame.

With either the soft or sharp approach mentioned, your choice of aperture is critical. It's often the case that no single *f*-stop is perfect, and you must balance the need for sharpness of the main subject against the need for a soft, out-of-focus background. Because of this, I almost always “bracket” my captures with a range of aperture settings. Had I wanted more sharpness in the flower, I would have tried exposures at smaller openings. By bracketing while in the field, I can later find the optimum balance of focus while editing through the variations. I'm able to see the subtle variations much more easily on my computer monitor.

Whether you use a macro lens, extension tubes or simply zoom in tightly on nature's details with your regular lenses, learning the basics of close-up photography can add depth to your portfolio, as well as offer new excitement for the wondrous details of nature all around us! **OP**

*To learn about his one-on-one Yosemite workshops, ebooks, iPad app, and to see his latest images, visit **William Neill's** website and photo-blog at WilliamNeill.com.*



Stones

Tilt and shift adjustments allow me to photograph from lower angles across a subject such as these stones. The more oblique angles often help me capture the best perspectives for highlights and reflections in subjects such as the patterns in water ripples or ice.

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Text & Photography by Tom Post

Located in Torres del Paine National Park, in Chile's Patagonia region, the Grey Glacier is a stunning place to visit. Blue and white pillars of ice stand silent in a line as they wait their turn to plunge into the ice lagoon below. Once calved, large icebergs catch the wind and sail 14 miles across the lagoon to the beach. They make their final stand for weeks, melting slowly, too stubborn to let go. The "Grey" in the name doesn't describe the glacier, but rather the large amounts of sediment from melted ice in the lagoon that stretches from its face. The glacier gets its deep blue color when sunlight hits its surface, scattering the blue wavelength and absorbing the red wavelength.

Getting to Grey Glacier is an hour boat ride that operates four times a day from Hotel Lago Grey. It's a sturdy, 50-passenger boat with plenty of room to maneuver into place for great shots. While onboard, you get a detailed history of the park and enjoy their signature drink, a pisco sour, chilled with glacial ice. On the trip, you visit the three faces of the glacier, each more spectacular than the last. The third face stands over 50 meters tall.

On this day, beautiful lenticular clouds formed over the ancient ice. The clouds added a mystical quality to the landscape. As we rounded the final bend, two slits in the ice caught my eye. They shone with an amazing blue color and, ultimately, added a place for the eye to rest in an otherwise chaotic scene. The glaciers of the Southern Patagonian Ice Field lose about 20 billion tons of ice annually due to climate change, so if you're compelled to visit, do it soon! **OP**

*To see more of **Tom Post's** photography, visit his website at tompostphotography.com. Follow him on 500px at 500px.com/tompost123, on Instagram at instagram.com/tompost123 and on Flickr at flickr.com/photos/tompost.*



Nikon D800, AF-S Nikkor 24-70mm f/2.8G ED at 44mm, f/2.8, 1/2000 sec., ISO 100

Grey Glacier

Torres Del Paine National Park, Chile





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TEXT & PHOTOGRAPHY BY ADAM WOODWORTH



When it comes to landscape photography, don't just think big, think wide! Ultrawide-angle zoom lenses allow you to capture a scene with a unique, expansive perspective. With a good ultrawide-angle lens and some simple techniques, you'll be taking your landscape photos to new heights.

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Put It In Perspective

Using an ultrawide zoom isn't just about capturing more stuff in the frame; it's about capturing the drama and beauty of a unique view on the world that only ultrawides can provide.

With an ultrawide lens, you can make small features in the foreground seem much larger and more dramatic against the background. Picture yourself at a waterfall, standing in a stream with some interesting rapids around rocks in the foreground, but the rocks are very small in comparison to the waterfall, and framing them with a 24mm or so wide-angle lens doesn't capture the energy that you feel while standing there. With a superwide-angle lens on your camera (something in the range of 14-17mm for a full-frame camera), you can zoom out and get down really low and right in front of the rocks, putting them front and center, and making them larger than life, while still capturing the dramatic waterfall behind them.

Of course, there are plenty of other ways to use your wide-angle zoom. If the grand scene in front of you has enough interesting features and light going on through the frame at 14mm when you're standing up straight, there's no reason you can't shoot that angle. Just make sure you get that foreground anchored well.

*Canon EF 16-35mm
f/2.8L II USM*



*Tokina AT-X 17-35
F4 PRO FX*



**Tamron SP 15-30mm
F/2.8 Di VC USD**

Foreground Is King

Don't fall into the trap of using your ultrawide lens to take in that amazing, sky-filling sunset glow while forgetting about the foreground. An amazing background usually needs to be anchored by something to draw the viewer's attention through the image. In the realm of wide-angle landscapes, this can often be rocks getting washed over in waves at the seacoast with a sunrise/sunset backdrop, rapids in a stream with a waterfall behind them, delicate wildflowers juxtaposed against rugged mountains or even lobster boats in a harbor with dramatic light—the list goes on.

Get It In Focus

One of the handy things about ultrawides is their ability to capture everything in focus in a single shot, from a few feet in front of you to infinity. Take care to focus the correct distance away for your focal length at $f/11$ and you'll often get the entire scene in focus (unless some part of the foreground is very close to the lens). Take a look at the iPhone app OptimumCS-Pro for determining focus distances that are much more accurate than hyperfocal marks.

For those cases where you're extremely close to foreground objects that force you into really small apertures, where diffraction takes a toll on sharpness, you can take multiple exposures at different focus distances and blend them together in Photoshop to create an image that has sharp focus across the entire frame. This technique is called focus stacking. Photoshop's AutoBlend tool can often do the work for you, but sometimes you'll need to manually blend the layers together using layer masks.

Filter Considerations

Landscape photography wouldn't be complete without some extra pieces of equipment. Filters are incredibly useful tools, and when it comes to wide-angle zooms, they come with some "gotchas." For one, a polarizer can be your best friend at a waterfall in the woods, where it cuts down glare on wet rocks and increases the saturation of the foliage. On an ultrawide-



**Nikon AF-S NIKKOR
14-24mm f/2.8G ED**

**Sony Vario-Tessar T* FE
16-35mm F4 ZA OSS**

angle lens, however, it can cause problems when shooting a scene with lots of blue sky. An ultrawide lens has such a large field of view that, when using a polarizer, one side of the sky can turn dark blue while the other side is lighter blue, depending on how you have the polarizer rotated. This looks really unnatural and distracting, so take care when using polarizers on your ultrawide with a blue sky.

Another "gotcha"—some ultrawide zooms have permanently affixed lens hoods and very large front lens elements, requir-

A Selection of Ultrawide Zoom Lenses

	Model	Format	Mount(s)	Est. St. Price
Canon	EF-M 11-22mm <i>f</i> /4-5.6 IS STM	EOS M (APS-C)	Canon M	\$399
Canon	EF-S 10-18mm <i>f</i> /4.5-5.6 IS STM	APS-C	Canon EF-S	\$299
Canon	EF-S 10-22mm <i>f</i> /3.5-4.5 USM	APS-C	Canon EF-S	\$649
Canon	EF 8-15mm <i>f</i> /4L Fisheye USM	Full Frame	Canon EF	\$1,249
Canon	EF 11-24mm <i>f</i> /4L USM	Full Frame	Canon EF	\$2,999
Canon	EF 16-35mm <i>f</i> /2.8L II USM	Full Frame	Canon EF	\$1,599
Canon	EF 16-35mm <i>f</i> /4L IS USM	Full Frame	Canon EF	\$1,099
Canon	EF 17-40mm <i>f</i> /4L USM	Full Frame	Canon EF	\$799
Fujifilm	XF10-24mm <i>f</i> /4 R OIS	APS-C	Fujinon XF	\$899
Leica	TRI-ELMAR-M 16-18-21mm <i>f</i> /4	Full Frame	Leica M	\$6,295
Nikon	1 NIKKOR 6.7-13mm <i>f</i> /3.5-5.6 VR	Nikon CX	Nikon 1-Mount	\$499
Nikon	AF-S DX NIKKOR 10-24mm <i>f</i> /3.5-4.5G ED	Nikon DX	Nikon F	\$899
Nikon	AF DX Fisheye-Nikkor 10.5mm <i>f</i> /2.8G ED	Nikon DX	Nikon F	\$774
Nikon	AF-S NIKKOR 14-24mm <i>f</i> /2.8G ED	Nikon FX	Nikon F	\$1,999
Nikon	AF-S NIKKOR 16-35mm <i>f</i> /4G ED VR	Nikon FX	Nikon F	\$1,259
Nikon	AF-S Zoom-Nikkor 17-35mm <i>f</i> /2.8D IF-ED	Nikon FX	Nikon F	\$1,954
Olympus	M.Zuiko ED 7-14mm <i>f</i> /2.8 PRO	Micro Four Thirds	Micro Four Thirds	\$1,299
Panasonic	Lumix G VARIO 7-14mm F/4.0 ASPH	Micro Four Thirds	Micro Four Thirds	\$799
Pentax	smc DA 10-17mm <i>f</i> /3.5-4.5 ED (IF) Fish-Eye	APS-C	Pentax K	\$449
Sigma	8-16mm F4.5-5.6 DC HSM	APS-C	Canon, Nikon, Pentax, Sigma, Sony	\$699
Sigma	10-20mm F3.5 EX DC HSM	APS-C	Canon, Nikon, Pentax, Sigma, Sony	\$449
Sigma	12-24mm F4.5-5.6 DG HSM II	Full Frame	Canon, Nikon, Pentax, Sigma, Sony	\$949
Sony	Vario-Sonnar T* 16-35mm F2.8 ZA SSM	Full Frame	A Mount	\$1,999
Sony	DT 11-18mm F4.5-5.6	APS-C	A Mount	\$799
Sony	Vario-Tessar T* FE 16-35mm F4 ZA OSS	Full Frame	E Mount	\$1,349
Sony	E 10-18mm F4 OSS	APS-C	E Mount	\$849
Tamron	SP 10-24mm F/3.5-4.5 Di II	APS-C	Canon, Nikon, Pentax, Sony	\$499
Tamron	SP 15-30mm F/2.8 Di VC USD	Full Frame	Canon, Nikon, Sony	\$1,199
Tokina	AT-X 107 AF DX FISHEYE	APS-C	Canon, Nikon	\$549
Tokina	AT-X 11-20 F2.8 PRO DX	APS-C	Canon, Nikon	\$549
Tokina	AT-X 116 PRO DX II	APS-C	Canon, Nikon, Sony	\$449
Tokina	AT-X 12-28 F4 PRO DX	APS-C	Canon, Nikon	\$449
Tokina	AT-X 107 AF DX NH FISHEYE	Full Frame	Canon, Nikon	\$549
Tokina	AT-X 16-28 F2.8 PRO FX	Full Frame	Canon, Nikon	\$589
Tokina	AT-X 17-35 F4 PRO FX	Full Frame	Canon, Nikon	\$449

ing special third-party filter holders and extra-large filters, which can take up quite a bit of space in your camera bag compared to normal-sized filters. Plenty of ultrawides take normal filters, though.

Lens Choices

Choosing the right wide zoom is largely a matter of which camera you have and your budget; in some cases, you'll have to choose between the flexibility of being able to use regular filters, but with a shorter (less wide) focal length versus the desire to have the widest angle possible, along with a fast maximum aperture that's useful for night photography, but with less zoom capability and the need to use special filter holders.

You may consider getting a prime wide-angle lens, and while primes are

often touted as being sharper than zooms, the reality is that most high-quality zoom lenses these days are excellent. In fact, most ultrawide-angle lenses on the market are zooms—there are more ultrawide zooms available than ultrawide primes.

The chart includes current wide-angle zooms with 35mm-equivalent focal ranges starting at 17mm or wider. **OP**

Adam Woodworth is a landscape photographer, fine-art printer, award-winning filmmaker and software engineer. Originally from Maine, he now resides in New Hampshire. Woodworth has had a love of photography for most of his life, and his main focus now is landscape photography and astrophotography. Learn more about his techniques through his video tutorial at adamwoodworth.com.



Sigma 8-16mm F4.5-5.6 DC HSM



Creative Landscape Photography

TEXT & PHOTOGRAPHY
BY GLENN RANDALL

Can a realistic landscape photograph be creative? I think the answer is yes, but only if you have a clear understanding of what creativity really means. For a landscape photographer, creativity doesn't emerge, fully formed, from the void. It emerges when the photographer makes a new, unexpected, but suddenly obvious connection between bits of seemingly unrelated knowledge already stored in that photographer's head. Unlike painters and novelists, landscape photographers can't sit in a darkened room, conjure an image or story out of nothing, then put their vision down on canvas or the printed page. Landscape photographs must be grounded in reality.

Creativity in landscape photography is founded on knowledge of the terrain where the photographer plans to shoot,

coupled with an understanding of key concepts in atmospheric optics, geography, astronomy, botany, meteorology and psychology.

Knowledge of the terrain lets photographers focus their efforts on the land's most dramatic and iconic features.

Understanding atmospheric optics, the science of light, allows photographers to predict the most vivid displays of alpenglow, where rainbows will appear and how polarizers will interact with reflections.

Understanding geography helps photographers observe how the angle of sunrise and sunset varies throughout the year.

A study of astronomy lets photographers predict where to go to shoot moonrise and moonset, the Milky Way, meteor showers, star trails and lunar eclipses.

A bit of botany assists in refining your search for wildflowers.

The basics of meteorology help you plan shoots and anticipate what may happen next.

Understanding how our visual system processes high-contrast scenes can help you create better photos of dramatically lit subjects.

Clearly, mastering the technical features of your camera is just the first step toward becoming a creative landscape photographer.

We tend to think of creativity as some kind of magical talent that only a few gifted people possess. This mistaken understanding can easily lead photographers to believe that they can never be creative. But as Roger von Oech, author of *A Whack on the Side of the Head: How You Can Be More Creative*, has pointed out, creativity is usually founded, first and foremost, on a broad and deep knowledge of a subject. Even the landscape painters I



**Knowledge is only
the first step toward
inspired images**

know often use a photograph as a starting point, and the best novelists are usually acute observers of human nature and the society around them.

As von Oech puts it, “Knowledge is the stuff from which new ideas are made. Nonetheless, knowledge alone won’t make a person creative. I think that we’ve all known people who knew lots of facts and nothing creative happened. Their knowledge just sat in their crania because they didn’t think about what they knew in any new ways. Thus, the real key to being creative lies in what we do with our knowledge.”

It’s important to distinguish a creative image from one that’s merely different. Different is easy; creative is hard. An image that’s merely different leaves the viewer puzzled about why you made it. A creative image is one that feels fresh and new, yet oh-so-right.

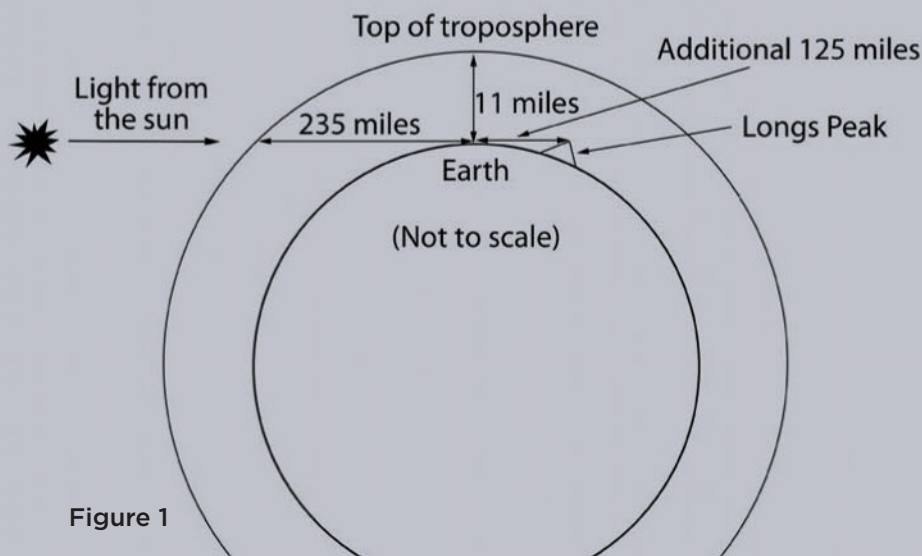
Creativity In Action

Let’s look at an example of creativity in action. One day in July, my wife Cora and I were day-hiking in the Indian Peaks Wilderness. Around noon, we reached a stream. In the flat midday light, the stream seemed unremarkable. As I looked down the valley past Lake Isabelle, however, I noticed that I could see the plains 6,000 feet below, framed by the steep valley walls. I used a compass to measure a bearing to the plains: 80 degrees. I already knew that at the latitude of Colorado, the angle of sunrise varies from an azimuth of 58 degrees to 121 degrees—a difference of over 60 degrees. If I came back at the right time of year, the sun would rise into the V-shaped gap formed by the valley walls. That, in turn, meant that the ordinary-looking stream at my feet would be bathed in warm, moment-of-sunrise light. And not only that: I knew from my study of atmospheric optics that the color of that light could be even richer than the light of a sunrise out on the plains. Here’s why.

On a clear day, the light at sunrise and sunset is warm because it has followed a long path through the atmosphere. During its journey, blue light scatters out of the beam, while red light travels straight ahead. The longer the path, the greater the selective sorting of wavelengths. The path followed by light reaching my stream would be exceptionally long because the horizon was much lower than my subject. Sunrise light would enter the atmosphere, skim the earth’s surface somewhere out in eastern Colorado, then rise back up through the atmosphere and trace intricate gold patterns on the flowing water. That extra path length—from the point in eastern Colorado where the light skims the surface to my subject—would make the sunrise light even more vibrant than the same sunrise viewed from the plains. This principle of atmospheric optics explains why tall mountains that rise abruptly above nearby plains can get such amazing light, as shown in Fig. 1.



Successful landscape photography is both art and science. Studying an area’s geography, in combination with an understanding of astronomy and meteorology, allows you to plan photographs that enhance the landscape with atmospheric and celestial events. ABOVE, LEFT: The Milky Way over Longs Peak from the Emerald Lake Trail after an April snowstorm, Rocky Mountain National Park, Colorado. ABOVE: Full moon through Delicate Arch, Arches National Park, Utah.



Sunrise Above Lake Isabelle, Indian Peaks Wilderness, near Boulder, Colorado. When I discovered this location on a summer day in July, I knew that if I returned to photograph it at the right time of year, the sun would rise into the V-shaped gap formed by the valley walls and illuminate the stream with warm sunrise light.

When I got home, I checked the Photographer's Ephemeris (photoephemeris.com) and learned that the sun would rise at an azimuth of 80 degrees around September 1. I returned to the stream at sunrise three times before coming up with the image I call "Sunrise Above Lake Isabelle."

Unlocking Creativity

In his book, von Oech discusses a number of mental locks on creativity. One of the most relevant for landscape photography is the notion that there's only one right answer, a belief that was pounded into us by a dozen years of classroom test-taking. When composing landscape images, however, it's often the second, third or tenth right answer that actually will be the most evocative.

Take a look at the series of images I made of a cornice on Black Face Mountain near Telluride. I discovered this corniced knoll in late afternoon, but the cornice face was already in shade, so the light didn't reveal the cornice's form effectively (Fig. 2). I tried again at sunset, but by then the entire knoll was in shade (Fig. 3). I returned in the morning, when the light did reveal every graceful curve of the sculpted snow, and shot an overall image of the knoll (Fig. 4), but the composition seemed unfocused, with too many elements that weren't contributing to my main idea. I drilled down further and tried again (Fig. 5), but the boring region in the middle of the frame made me step about three feet left, which put the most interesting elements closer together and allowed me to produce my favorite image of this cornice (Fig. 6).

Another mental lock on creativity is the notion that play is frivolous. As von Oech points out, "Necessity may be the mother of invention, but play is certainly the father." Play comes naturally to children, but it can be hard for adults to adopt a playful attitude. One stumbling block is the feeling, again reinforced by years of test-taking, that mistakes are always bad. A child at play isn't thinking in terms of right and wrong answers; she's simply engrossed in the game.

Think of mistakes as the way you learn what to try next, not as shameful failures. Even success, narrowly conceived, can have its downside. Not making many mistakes? It could mean you're really good—or it could mean you're missing opportunities by not being aggressive enough about trying new things.



Figure 2



Figure 3

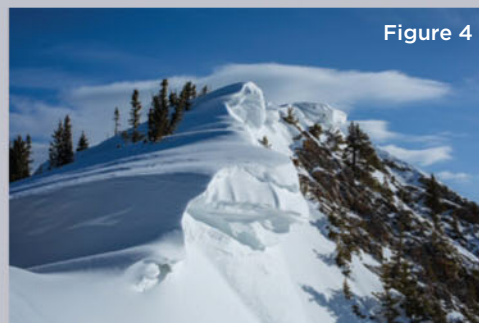


Figure 4



Figure 5



Figure 6

It often takes multiple attempts at photographing a place, experimenting with different angles and times of day, to capture an image that reveals the location in an evocative way. This series of images shows my attempts to photograph a cornice on Black Face Mountain near Telluride, finally arriving at my favorite image of the scene.

Success can also lead eventually to failure if it causes you to repeat your successful ideas endlessly, using similar ideas and compositions every time you go out. As a Colorado photographer, I have many images of a clump of columbine or a grove of aspen with a mountain in the background. Do I really need anymore? Only if I can articulate a reason why the new shot is somehow different or better than what I already have.

For me, play often takes the form of asking “what if” questions. Here’s an example. I first became interested in photographing flowing water at sunrise when I saw Galen Rowell’s photograph of a stream flowing into California’s Lake Tahoe. I began studying topographic maps of Colorado’s Front Range, looking for streams and waterfalls that could get moment-of-sunrise light. Columbine Falls, on the eastern flank of Longs Peak, seemed promising. After shooting sunrise at the falls five times, positioning myself each time alongside or above the falls, I finally noticed that the lower step of the falls actually flowed over a large overhang. What if I could find a way to get behind the falls? What would that look like at sunrise?

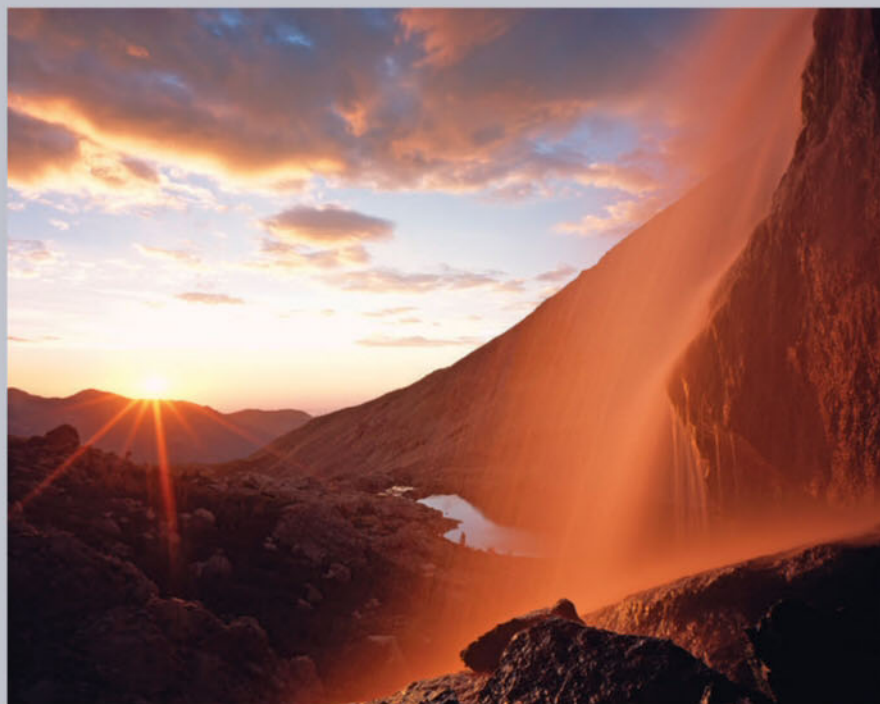
When I returned to the falls, I used a large umbrella to protect my 4x5 field camera as I inched as close to the cascading water as possible. I called the resulting image “Roaring Fork Sunrise.”

Here’s another way to get the cre-

ative juices flowing. Instead of simply searching for beauty, look for the iconic image, the single frame that sums up a complex whole. For example, what would an iconic image of Rocky Mountain National Park look like? Maybe an image that includes Longs Peak, the highest and most dramatic peak in the park, a bull elk and the alpine tundra that covers dozens of square miles of the park’s highest eleva-

tions. After several days of scouting and shooting along the Ute Trail, I came up with “Bull Elk and Longs Peak.”

Or try this approach: Look for images that serve as metaphors. I’ve often thought of mountaineering as a metaphor for the human condition. It embodies in concrete form the way we reach for the sky, yet can only climb so high. In 2006, I began working on a series of images I hoped would capture the exhilarating,



Roaring Fork Sunrise, Rocky Mountain National Park, Colorado.

humbling and awe-inspiring experience of being a tiny speck on top of the world. Seven years later, I finished shooting sunrise from the summit of all 54 of Colorado's 14,000-foot peaks. "Sunrise from Mt. Wilson" is one of my favorite images from the series.

Four Stages Of Creativity

In *A Whack on the Side of the Head*, von Oech distinguishes four stages of creativity: explorer, artist, judge and warrior. In the explorer phase, you're actively scouting an area, searching for great foregrounds, watching the way the light plays across the landscape at sunrise and sunset, and seeking out the area's scenic climaxes. You're also learning everything you can about the craft of photography and the many scientific disciplines that will help you understand the natural world and how we perceive it. In the artist phase, you're trying to put together all those disparate bits of knowledge in a way that your viewer will find new, surprising and innovative, not just random and odd.

Once you have a new idea, you need to don your judge's robes. Is this idea

really going to work? If the answer is yes, it's time to steel yourself for battle because you may have to fight to create the image you see in your mind's eye. You may need to fail over and over again before you succeed. Each try may require getting up hours before sunrise or staying up until the wee hours of the morning. Many great ideas are still-born because the creator didn't fight to bring them to life. Commit the time and energy required to bring your best ideas

into the world, and the result will be truly creative landscape photographs. **OR**

Glenn Randall's most recent books are *The Art, Science, and Craft of Great Landscape Photography (Rocky Nook)* and *Sunrise from the Summit: First Light on Colorado's Fourteeners (Farcountry Press)*. See more of his work, sign up for his monthly newsletter, read his blog and learn about workshops at glennrandall.com.



TOP: Bull Elk and Longs Peak. **ABOVE:** Wilson Peak and Gladstone Peak at sunrise from the summit of 14,246-foot Mount Wilson, San Miguel Mountains, Lizard Head Wilderness, Colorado. This image is among my favorites from a multiyear project photographing all 54 of Colorado's 14,000-foot peaks.



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ANCIENT SOUTH

Exploring the
dwellings and
rock art of
the Ancestral
Puebloans



Hovenweep Castle, Hovenweep National Monument, Utah

WEST

TEXT & PHOTOGRAPHY BY LARRY LINDAHL

In the pursuit of landscape photography within the American Southwest, one inevitably comes upon the ancient architecture of the Ancestral Puebloans. Hidden among the cliffs and canyons, often tucked into sandstone alcoves, their dwellings and rock art leave a rich legacy of humans integrating with this land for thousands of years. As photographers, these prehistoric sites ask us to understand the geometry of shapes and converging lines, the connection of earth and sky, and the resonating power of place. The ancient buildings rise from the sandstone landscape with the imperceptible transition of geology to masonry bricks standing against the sky. Rock art embellishes natural formations, leaving narratives lost in the wind. These sites portray the human struggle to find harmony with nature, a rich story to ponder in our modern times.

Navajo National Monument, Arizona

Two of the most pristine ancient dwellings you'll ever find are Betatakin and Keet Seel. It appears as if the original residents departed only yesterday. These are also two of the more challenging sites to visit.

Betatakin is a sprawling village across a round cave under tall sandstone cliffs. To photograph it up close, you must take the three- to five-mile, round-trip, ranger-led tours, which start at an elevation of 7,300 feet, with a 700-foot elevation change. The trail ends just beyond a small aspen grove at the canyon bottom, directly below the dwellings. Above, centuries-old walls stand solid, with thin wooden ladders leading to rooftops. You'll also see petroglyphs and pictographs near the alcove.

A less strenuous way to photograph Betatakin, although from quite a distance, is from the Sandal Trail. At the visitor center, follow the paved walkway, a one-mile round-trip, to the overlook.

Keet Seel is best photographed on an overnight backpack trip. The 17-mile round-trip is a commitment of both planning and physical endurance. Upon arrival, a backcountry ranger will be waiting to guide you up a vertigo-inducing, 70-foot ladder into the 160-room dwelling. Note that no tripods are allowed.

Explore the street of gracefully offset, multistoried structures, and before you leave, find the two large, ancient pots sitting up on a wall—proof that this site is seemingly forgotten by time.

TRAVEL DETAILS: No entrance fee. Two free campgrounds. Sites open from Memorial Day weekend in May to Labor Day weekend in September each year. Betatakin tours are free, offered twice each morning. Keet Seel requires advance reservations and a backcountry permit. Park info: [nps.gov/nava](https://www.nps.gov/nava). Navajo National Monument is located at the end of AZ State Route 564; exit from U.S. Highway 160 about 21 miles southwest of Kayenta, Arizona. Monument Valley Navajo Tribal Park is about an hour away.



Keet Seel Ruin, Navajo National Monument, Arizona

Hovenweep National Monument, Colorado and Utah

What you'll notice after arriving is an immense silence blanketing the landscape. On the Great Sage Plain halfway between Cortez, Colorado, and Bluff, Utah, the monument is literally in the middle of nowhere. Archaeologists aren't certain about their motivation, but the ancient architects here chose the engineering challenge of constructing buildings atop boulders, including several multistory round and square towers.

From the visitor center, the Little Ruin Trail circles the nearby canyon on a mile-and-a-half loop dotted with captivating prehistoric dwellings and towers built between AD 1200 and 1300.

At the head of the canyon, a two-story square tower built on a boulder on the canyon floor overlooks a nearby spring. Hovenweep Castle sits perched on the canyon rim above. Miniature windows in the castle walls capture seasonal differences in sunbeams used by

the ancient ones to foretell an upcoming equinox or solstice.

At the castle, take the half-mile spur trail out to Tower Point. An eroding round tower sits alone, with an all-encompassing view of the canyon, a perfect golden-hour composition. Sleeping Ute Mountain spreads across the distant horizon, the snow-covered peaks catching last light.

Hovenweep was designated an International Dark Sky Park in 2014. When darkness descends and a rich canopy of stars and distant planets begins to emerge, you'll know why. Although the trail closes at dark, the park service schedules periodic night sky photography hikes to the castle.

There are several other sites with towers and dwellings to visit in outlying units of the monument. Paved roads lead to the visitor center, but you must take dirt roads to the Holly, Horseshoe, Hackberry, Cutthroat Castle and Cajon units.

TRAVEL DETAILS: No entrance

fee. Trails open sunrise-sunset. Campground has 31 sites; fee required. Park service warns visitors not to rely on GPS for driving directions; instead, use the directions on their website, **nps.gov/hove**. Nearby ancient sites include Mesa Verde National Park, Canyons of the Ancients National Monument and Natural Bridges Natural Monument.

Canyonlands National Park, Utah

Deep in Horseshoe Canyon, the Great Gallery rock art site is a mysterious place. Tall and otherworldly beings stare blankly from a pastel sandstone cliff. These Barrier Canyon-style pictographs have a haunting and powerful presence with their life-sized proportions.

Photographing the glyphs after they fall into midafternoon shade is best. The moment that the direct sunlight disappears from the cliff face is an ideal time. When the light still illuminates the rock shelf below, a subtle golden glow appears from the upward-

reflecting light. Through a telephoto lens, a few of the deep red pictographs show detailed embellishments using white and turquoise pigments, and hidden patterns incised into the stone.

The journey to the Great Gallery is part of the experience. The daylong excursion leaves the pavement between the towns of Green River and Hanksville, where you take 30 miles of slow, dirt roads before reaching the cliff-top trailhead. The trail quickly descends 780 feet of elevation on switchbacks in the canyon wall.

There are several panels of rock art to visit along the canyon bottom so expect the hike to take between 4 and 6 hours, but all the effort will be worth it after you witness this premier rock art panel.

TRAVEL DETAILS: No fee required. Groups of 20 or more must go in with a ranger. Primitive camping allowed at the trailhead; no drinking water, but a vault toilet is available. Park info and road conditions: [nps.gov/cany](https://www.nps.gov/cany). Nearby site with ancient dwellings and rock art is Natural Bridges National Monument.

Dinosaur National Monument, Colorado and Utah

As the name implies, this monument showcases dinosaurs with a quarry of stone-embedded fossils, including several *Stegosaurus* skeletons. The unexpected treasure is the rock art to be found in the park. There are five easy-to-find rock art sites, all with unique offerings. A particularly intriguing petroglyph panel is the remote McKee Springs site. Near many other fine renderings is a large humanlike figure holding a spiral shield with peculiar little anthropomorphic figures floating on both sides. The panel is at the base of a cliff up a relatively short trail. Ask about the condition of the dirt road before venturing out, and protect any site you visit by not touching the rock art.

The best time for this site is near the end of the golden hour and into dusk. As with many petroglyph sites, an oblique angle with a wide-angle lens will give the image a sense of scale and place. By staying after dark, you can experiment with light painting. Use a flashlight, and during a long exposure, carefully trace the lines of the petroglyph until the entire design is illuminated. This technique creates an interesting, otherworldly glow effect.

TRAVEL DETAILS: Entrance fee



Great Gallery, Canyonlands National Park, Utah



McKee Springs, Dinosaur National Monument, Utah

required. Camping is available at six campgrounds; fees vary. From Vernal, Utah, take U.S. Highway 40 east to Utah Highway 149 and go north to the monument visitor center. Park info: [nps.gov/dino](https://www.nps.gov/dino). Additional rock art sites in northeastern Utah include Dry Fork Canyon, Nine Mile Canyon, Sego Canyon and Buckhorn Canyon.

Mesa Verde National Park, Colorado

Cliff Palace, the largest and most recognizable of the cliff dwellings at Mesa

Verde, can easily be photographed from the nearby overlook. Arrive before twilight and you can capture the site, after the last tour, empty of visitors. Yet, most photographers want to visit the dwellings up close. Here lies the challenge: getting shots without tourists milling about during the daytime group tours. The park service responded to this issue, and offers Cliff Palace Photography Tours. These twice-weekly, 90-minute tours are limited to 10 people. They start in the late afternoon, good for rich colors, and tripods are allowed.



Spruce Tree House, Mesa Verde National Park, Colorado

The two other sites that require ranger-guided tours are Long House, a 2.5-hour tour, and Balcony House. Preplan for a mid-morning tour at Balcony House. Soft, reflected light from a nearby canyon wall adds a handsome glow to the 40-room dwelling. Considered an “adventurous tour” means it’s not for everyone. Access is up a 32-foot-tall ladder. Further along includes crawling through an 18-inch-wide, 12-foot-long tunnel, and up two 10-foot ladders.

Photographers are on their own to most places like the overlook of Square Tower House, best timed to the dynamic golden hour, and through the mesa-top Far View House.

Spruce Tree House has self-guided tours March to early November and ranger-guided tours in the winter to view the site from outside, but close enough for excellent photos.

The paved trail to Spruce Tree House begins from the Chapin Mesa Archeological [sic] Museum. The half-mile round-trip twists and curves 100 feet of elevation into the wooded canyon. It’s the third-largest cliff dwelling in the park, and one of the best preserved.

In front of the multistory rooms, tall ladders extend up from kivas, the underground ceremonial chambers, giving a sense of depth to photos. One of the site’s kivas is open to the public. An image from inside with the ladder is a classic perspective.

TRAVEL DETAILS: Entrance and tour fees



Three Rivers Petroglyph Site, New Mexico

required. Open year-round, weather permitting, except Thanksgiving Day, Christmas Day and New Year's Day. Camping available May to October. Cliff Palace photography tours with advance ticket purchase at **recreation.gov**. Located on Highway 160 between Cortez and Durango, Colorado. Park info: nps.gov/meve.

NOTE: On Wednesday, December 9, 2015, lanterns will light Cliff Palace after dark to celebrate the National Park Service Centennial year. Photographers will be allowed to photograph from Sun Temple Overlook; the view is from across a small canyon. No one will be allowed into the site. The following day, on Thursday, December 10, 2015, there will be a Luminaria Holiday Open House. From 4:00 to 9:00 p.m., the trail to Spruce Tree House is lined with

A one-mile round-trip trail is a good introduction to one of the largest, and most accessible, rock art sites in the Southwest. The rich concentration of detailed rock art appears high contrast and distinct in almost any light, including moonlight, but subdued lighting works best—a good rule to showcase any form of rock art. Be on the trail before sunrise when the site is quiet, the summer temperatures are most tolerable and the predawn western horizon glows with an ethereal pink and blue.

Cross-country travel is allowed within the park's 50 acres. Some of the most intriguing designs are well beyond the park trail. Scattered further along the north-south ridge are numerous and artistically rendered animals, bear paw prints, cosmic patterns, symbols and a few large, curious human faces.



Pueblo Bonito, Chaco Culture National Historical Park, New Mexico

luminarias, and lanterns hidden inside the dwelling will make you imagine torches and cooking fires are glowing throughout the alcove. Whether you stay on the rim or hike down the trail, you'll get enchanting images.

Three Rivers Petroglyph Site, New Mexico

Hidden in the southern New Mexico region of the Chihuahuan Desert, this ridgetop site is dedicated to over 21,000 petroglyphs. The pecked designs visually pop from dark, patina-covered boulders, the work of the Jornada Mogollon culture between AD 900 and 1400.

When sunset approaches the Tularosa Basin, the Sierra Blanca range lights up in amber, with violet shadows making a handsome background for the glyphs in this stark desert landscape.

TRAVEL DETAILS: Entrance fee required, managed by the BLM, open year-round. Campground (9 sites) has drinking water, bathrooms, picnic shelters, tent sites and RV hookups. Located on Highway 54 between Carrizozo and Tularosa, New Mexico. Park info: blm.gov/nm/st/en/prog/recreation/las_cruces/three_rivers.html. Nearby sites of interest are Salinas and White Sands national monuments.

Chaco Culture National Historical Park, New Mexico

Renowned as a premier pre-Columbian site, Pueblo Bonito is the largest ancient single structure built north of Mexico. It covers almost three acres, with more than 600 rooms, and once stood at least four stories tall.

A self-guided pathway through the site provides excellent perspectives of the architecture and intricate rock work. In late afternoon, take the Pueblo Alto Trail for an elevated overview. The signed trail starts northwest of the dwelling, and climbs 270 feet in elevation before crossing a broad shelf to the overlook. Allow time on this 2-mile round-trip for a safe, unhurried return. The gated Canyon Loop Drive closes at sunset.

The gate opens again at 7:00 a.m. Pueblo Bonito has many roofless rooms, and sunrise creates phenomenal light inside the dwelling. A few engaging images of receding interior doorways are found by starting the interpretive trail in reverse. Look on the map for the exit point and enter there. Just inside, a T-shaped doorway frames more doorways. Around the corner is another view of several doorways. Late September to mid-February is ideal for these photos, when the road opens around sunrise.

Across the canyon, Casa Rinconada is a 64-foot-wide ceremonial kiva, the largest excavated kiva in the Southwest. Consider bracketing a series of exposures for an HDR image to preserve details in the shadows of the subterranean chamber, as well as capture the bright New Mexican sky. A unique opportunity is to attend a guided sunrise walk to the kiva (reservations required) held on the spring or fall equinox and the summer solstice.

TRAVEL DETAILS: Entrance fee required. Open year-round except Thanksgiving, Christmas Day and New Year's Day. Drinking water, no food services, camping by reservation only at **recreation.gov**. Located south of Farmington and north of Grants, New Mexico, with a choice of approaches. Park info: nps.gov/chcu. Nearby site of interest is Aztec Ruins National Monument. OP

*Professional travel and nature photographer **Larry Lindahl**'s latest book is The Ancient Southwest: A Guide to Archaeological Sites (Rio Nuevo Publishers). See more of his work, buy his books and sign up for his workshops at larrylindahl.com.*

Grand Canyon is as difficult to photograph as it is breathtaking. The canyon's layered detail shrinks in a lens that's wide enough to adequately convey its scale, while its overwhelming scale is lost to a telephoto lens focused on its detail. Grand Canyon is really two worlds: the year-round, relatively accessible, always bustling South Rim and the warm-month-only (mid-May through Thanksgiving), relatively remote, more peaceful North Rim. Separated by 10 crow-flying miles, it's a grueling, 18-mile hike and a scenic four-hour drive between rims.

South Rim Tips

The section of the Colorado River visible from the South Rim moves more or less east to west. Among the vista points with good views to the east, for sunrise and afternoon rainbows, are Grandview Point, Mather Point, Yaki Point, Powell Point and Hopi Point. Vistas where you can photograph the setting sun and morning rainbows include Desert View, Navajo Point, Lipan Point, Yavapai Point, Hopi Point and Pima Point.

Much of your South Rim success will be determined by your ability to anticipate and avoid tourists. The South Rim from Mather Point west, with its close proximity to park services (parking, hotels, restaurants, shops, camping), teems with tourists. Further west, the Hermit's Rest Road shuttles (shuttle or handicap access only in summer) are also packed all summer long.

Mather Point is so crowded for sunrise and sunset that it's usually best to avoid, but if you hit the snooze once too



Sunset, Desert View, Grand Canyon, South Rim. An extreme telephoto lens will compress Grand Canyon's horizontally stacked ridges; composing toward the sun at sunrise or sunset will create silhouettes, and a hard-stop graduated neutral-density filter will help retain sunrise/sunset color.



Milky Way, Angel's Window (near Cape Royal), Grand Canyon, North Rim. Dark night skies and an open view of the southern horizon make the North Rim ideal for summer Milky Way photography. Because the view from Grand Canyon Lodge and Bright Angel Point is partially washed out by light pollution from Grand Canyon Village on the South Rim, Cape Royal, Angel's Window and Walhalla Point are a better bet.



GRAND CANYON HOTSPOTS

Tips and suggested locations for epic images of this celebrated natural wonder

TEXT & PHOTOGRAPHY BY GARY HART



Three Strikes, Bright Angel Point, Grand Canyon, North Rim. Grand Canyon's summer monsoon storms tend to move south to north. The southern exposure of the North Rim's Grand Canyon Lodge and Bright Angel Point provides a wonderful vantage point for the thunderstorms' approach, as well as nearby cover when they get too close.

Sunset, Hopi Point, Grand Canyon, South Rim. Walking the canyon's rim not only gets you away from the crowds hovering at the designated vista, it's also the best way to find the trees, shrubs and rocks that add depth to your images.

often and find yourself needing a sunrise location that doesn't require a lot of effort before your first coffee, try the view from the rail near the amphitheater, just east of the packed Mather Point vista. Or, better yet, park near Yavapai Point, about a mile west, and walk the rim toward Mather until you find a view that moves you.

For a South Rim sunset, it's hard to beat Hopi Point. With views in both directions, Hopi is worth the Hermit's Rest Road shuttle ride, but this fact isn't lost on everyone else in the park, and you may just feel like they've all joined you. If you don't want to deal with the crowd at Hopi, less crowded Hermit's Rest Road options are Powell Point (a short walk from Hopi) for views to the north and east, and Pima Point for views north and west.

The eastern vista points along Desert View Road (Highway 64)—Lipan Point, Navajo Point and Desert View—tend to be a little less crowded, especially if you explore a short distance from the designated vista. If I don't have a specific objective other than to find a nice shot, this is where I go, especially for sunset.

What makes these eastside vistas particularly appealing is their view of the 90° bend in the Colorado River. Near the bend you can look north, upriver, toward the Little Colorado River and Marble Canyon, and a great distance downriver to the west. This west view from any of the South Rim's eastside vistas is the

best place to break out the telephoto lens and compress the succession of ridges that recede into the distance.

North Rim Tips

After spending a few days battling crowds on the South Rim, the relative peace of the North Rim is a welcome relief. This peace, and the variety of scenes, is why I consider the South Rim the tourist's Grand Canyon and the North Rim the photographer's Grand Canyon.

While South Rim photography is primarily about grand views, on the North Rim you can also find summer wildflowers and evergreen forests accented by groves of aspen that turn brilliant yellow in late September. And its views to the south make the North Rim the best place to view approaching thunderstorms during the summer monsoon, as well as the glow of the Milky Way's center on a dark summer night.

For the best south and west views on the North Rim, check out Bright Angel Point and Cape Royal. Bright Angel is a five-minute walk from the North Rim Visitor Center and Grand Canyon Lodge (the North Rim's only rim-side lodging).

Cape Royal is about an hour from Grand Canyon Lodge, at the end of Cape Royal Road, and an easy 10-minute walk from the large parking lot there. While walking out to Cape Royal, if you're not bothered by heights, make sure to take the short detour out to Angel's Window.



The other easily accessed North Rim vistas look east, and all are accessible from Cape Royal Road: Point Imperial (a personal favorite), Vista Encantada (too obstructed by shrubs for my taste), Roosevelt Point and Walhalla Point.

If you want to do a little exploring, the North Rim is crisscrossed by a network of unpaved National Forest Service roads just outside the National Park Boundary (many navigable by passenger cars).

While dusty, washboard, 50-mile round-trips aren't for everyone, if you like rarely photographed, solitary canyon panoramas, these roads are well worth the effort.

Caution: Your GPS can't distinguish between the relatively navigable primary NFS roads and the narrow, often impassible side roads, so never attempt these roads without a prior visit to the North Rim Visitor Center for a detailed map and consultation with a ranger.

Equipment

While wide-angle shots are everywhere on the rim, it's a mistake to leave your telephoto home. I used to think I'd be fine if I could cover focal ranges from 20mm to 200mm, but the more I visit, the more I appreciate the value of a long lens for isolating individual features at Grand Canyon. On my latest visit, nearly a quarter of my images were in the 200mm to 600mm range.

A polarizer not only deepens the blue sky and enhances the clouds (especially for cross-canyon compositions), it also cuts some of the haze that frequently hangs below the rim and enriches the canyon's predominant red and green hues.

And despite the continued improvement of today's digital sensors, a graduated ND filter is invaluable for wringing every last stop of dynamic range from Grand Canyon's high-contrast sunrises and sunsets. The canyon's flat horizon is ideally suited for hard-transition GNDs. I get the most use from my 3-stop hard and 3-stop reverse GND filters.

Final Thoughts

Regardless of where you end up at Grand Canyon, arrive early enough to explore the rim nearby. In addition to a little more elbow room, you'll likely find a foreground tree or shrub to accent and add depth to your composition. And, most importantly, at each stop, be sure to set your camera aside long enough to simply take in the view and appreciate that you're witnessing one of the most beautiful scenes on Earth. OP

Gary Hart is a Northern California-based professional photographer and writer who conducts photo workshops in Death Valley, the Eastern Sierra, Grand Canyon, Hawaii and Yosemite. Gary's book of images, *Undiscovered Country*, was sold at Barnes & Noble stores throughout America. Visit his website at garyhartphotography.com.

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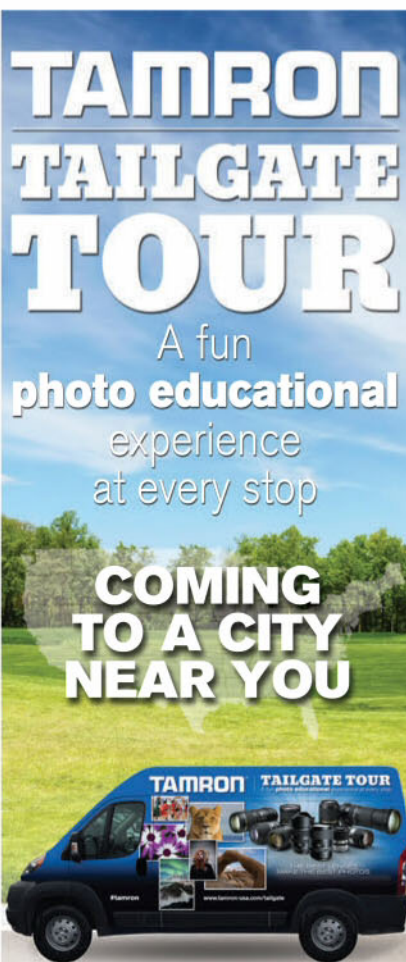
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tech tips

(Cont'd from page 29)

operates the camera wirelessly via an iPad or other tablet. You can set your focus using a magnified image, change camera settings, and fire the camera without touching it. I've successfully used a Canon EF 800mm lens with two Canon 2X tele-extendors (3200mm) on a bald eagle nest and obtained publishable images by using the CamRanger. I also use a 500mm lens with 2X and 1.4X tele-extendors to achieve the same excellent results. For more on extreme lens photography, see our article in the April 2014 issue of *Outdoor Photographer* (also available online).

Get Wide!

Any lens that offers 20mm or wider on a full-frame camera is an extreme wide-angle, in my opinion. On a smaller APS-C sensor, extreme is at about 12mm. The widest lenses are fisheye types that offer a 180° angle of view. Some record a circular pattern in the center of the frame and others cover the full frame. Obviously, while a fisheye lens gives a fantastic angle of view, it comes with considerable distortion. Unless the horizon is precisely placed through the middle of the frame, it will bend upward if you point the camera down and be bowl-shaped if you point the camera upward. Photography from within a room will produce walls that are distorted outward. It's fun, but it's not real. I prefer a rectilinear lens, one that's corrected for both the verticals and horizontals in the frame. The most common extreme wide-angle rectilinear lens would be the 14mm, with an angle of view of 114°. A new rectilinear lens that I've just started to use is an 11-24mm zoom. At 11mm, the angle of view is 126°, with breadth and clarity that amaze me.

The most common extreme wide-angle is a 16mm, usually part of a wide-angle 16-35mm zoom. The APS-C-sensor-equivalent lens would be a 10-22mm lens. The 16mm angle of view is 108°, which doesn't seem that much less than 126° until you experience it comparatively, looking through both lenses.

In addition to the distortion you'll see in extreme wide-angle lenses, you should be aware of two other shortcomings: light fall-off and chromatic aberrations at the edges. These now can be corrected within the camera and/or with imaging software. Light fall-off is most

noticeable when a wide-angle lens is used wide-open. Stop the lens down and it becomes less apparent, and around *f*/8 should be nearly gone. The software of some cameras actually corrects for light fall-off, but if it's noticeable in the computer, imaging software such as Adobe Photoshop and Lightroom and DxO can quickly balance the lighting. Chromatic aberrations are seen as colored fringing (usually magenta/red and green/cyan) in the extreme edges of the image. Photoshop can minimize this phenomenon, to a degree, but I've found that, with Canon lenses, the DPP software that comes with every Canon camera does a magnificent job of eliminating it. Each lens has a profile, and the software automatically optimizes the capture. Any chromatic aberration I found in the EF 11-24mm lens was magically eliminated!

Magnify!

The greater the magnification, the harder it is to get enough light and a sharp image. Most camera and lens manufacturers offer a 100mm or similar lens and a telephoto macro, such as a 180mm or 200mm macro. These lenses offer a life-size, 1X, or 1:1 capability without any accessories. If you want to go larger than 1X, you'll need extension tubes or tele-extendors. Each time you extend the lens by the equivalent of its focal length, you'll gain 1X. For example, 200 millimeters of extension will bring a 100mm macro lens to 3X. This is a bit unwieldy. Another option is to add a 2X tele-extender to any macro lens to double its magnification. Canon's MP-E 65mm *f*/2.8 1-5X lens will take you to 5X on a full-frame camera and 8X on Canon's APS-C cameras. You can even add a 2X tele-extender and get excellent 10X and 16X results. You'll need a flash system coupled with this or any macro lens when you go past the 1X magnification.

But, remember, no matter how extreme (and expensive) the optic, it won't do the job unless you use good photographic techniques! See above. **OR**

Learn about **George Lepp's** upcoming workshops and seminar opportunities on his website at GeorgeLepp.com. To watch a video of George's recent daylong class on CreativeLive, "Innovative Techniques for Outdoor Photography," visit CreativeLive.com.

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Matt Hoffman

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Endless Storage

The G-DOCK ev makes unlimited RAID storage practically effortless

BY THE EDITORS



The problem with most desktop backup drives is that once you've reached your storage capacity, you're faced with either storing the drive and its bulky enclosure indefinitely, or buying a new, larger-capacity drive and transferring all of your images to it. G-Technology's G-DOCK ev with Thunderbolt offers an innovative alternative.

The dual-bay dock hosts two drives that can be configured in either RAID 0 ("striping" for greater capacity) or RAID 1 ("mirrored" for data redundancy). For our purposes, configuring the drive as RAID 1 is the way to go—whatever data is on one drive is automatically copied to the second.

The G-DOCK ev is compatible with three drive options: the G-DRIVE ev (500 GB or 1 TB); the faster G-DRIVE ev 220 (2 TB); or the fastest, the solid-state G-DRIVE ev SSD (512 GB). These drives can operate independently of the dock, with bus-powered USB 3.0 connections for backups in the field.

When you return home, slip the drive

with your field backups into the dock, and all of your images will be copied automatically to the second drive. You can use any combination of G-DOCK ev drives, so you might opt for solid-state SSD in the field and the larger-capacity G-DRIVE 220 2 TB drive in bay 2 to house your backups.

The elegance of this solution is that when your backup drive is full, you simply eject and label it, and then store it securely, should the need for it ever arise. The compact design of these drives makes storing them relatively convenient compared to the larger desktop systems.

As an additional benefit, the G-DRIVE ev drives are also compatible with the G-DRIVE ev All Terrain Case (see our Holiday Buyer's Guide in this issue)

for enhanced water and shock protection in the field. The All Terrain Case is available separately or with a 1 TB drive included.

The G-DOCK ev with Thunderbolt ships with two 1 TB drives installed, with a list price of \$499.95. Additional drives range in price from the 500 GB G-DRIVE ev at \$99.95, to the 2 TB G-DRIVE ev 220 at \$349.95, to the ultrafast, solid-state 512 GB G-DRIVE ev SSD at \$499.95. g-technology.com




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		7" to 7.75"

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- Tightly grips to your tripod so they will not slide



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- Built to last with heavy-duty water-resistant Codura and lightweight, water-resistant nylon lining
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3Xpandable Internal dimensions 8" x 8" x 19.75" or 23.5" or 27.75"

Accommodates camera body with lenses such as Canon 200-400mm, 300mm f/2.8, 400mm DO, 500mm, Nikon 200-400mm, 300 f/2.8, 500mm, Sigma 500mm, 300-800mm, Sony 500mm

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Accommodates camera body and lens such as Canon & Nikon 400mm f/2.8, 500mm, 600mm, 800mm


 Shown with
 optional
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Folded Flat



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Pro



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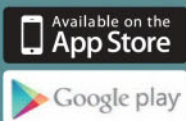
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Welcome Home

Christopher Brinkman came across something special when photographing in the Tetons in the late spring of 2015. “This female red fox had bred with a male cross fox, which resulted in both red and cross offspring,” he explains. “On this particular evening, there had been little activity at the den site—which I spent about half my trip watching and photographing—as both parents were away hunting for food. Around 9 p.m., with the sun setting behind the Tetons, mom returned with dinner. However, the kits seemed more interested in playing with mom and each other than eating the rodents she had brought them. One kit, in particular, had a habit of jumping on mom’s back to nip at her ears, and this evening was no exception.” To see more of Christopher Brinkman’s work, visit chrisbrinkmanphotography.com.



Christopher Brinkman

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